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OLDS & WHIPPLE,
INC.,
SEEDS AND
FERTILIZERS
HARTFORD, CONN.



1932

Vegetable Seed Trials





SEED, FERTILIZER

AND

AGRICULTURAL IMPLEMENT CATALOG

for 1932



FERTILIZER FACTORY:
Tolland Street, East Hartford, Conn.

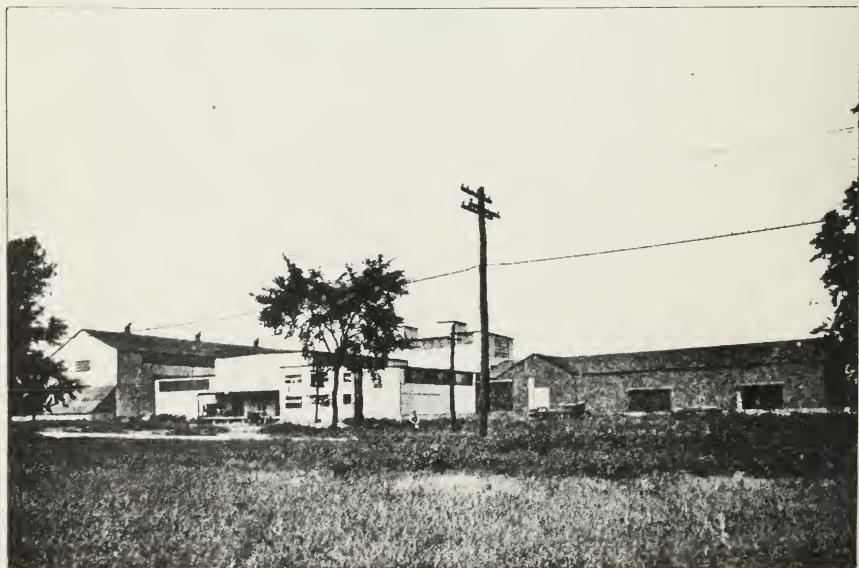
MAIN OFFICE AND IMPLEMENT WAREHOUSE:
164-6-8 State St., Hartford, Conn.

OLDS & WHIPPLE, Inc.



Offices and
Agricultural
Warerooms at
168 State Street,
Hartford, Conn.

Below is our
Fertilizer Fac-
tory located on
Tolland Street,
East Hartford,
Conn.



Foreword



CARRYING ON IN OUR FIFTY-FIFTH YEAR

For 1932 we are enabled to offer fertilizer at pre-war prices, some materials at even less than prices that prevailed from 1912 to 1915. In this connection we call your attention to the important change in the guaranty that will be printed on the bag or tag attached thereto, conforming to the ruling of Control Officials of all the New England States which says "The Guaranty shall be stated in terms of Nitrogen and not in terms of Ammonia." There need be no confusion on this point as all companies selling fertilizer must conform to this ruling. The whole matter is fully explained in the New England Homestead issue of October 10, 1931.

The low price of fertilizers will enable farmers to produce crops at a considerable saving over 1931 and, in 1931, prices were less than the years preceding that date. It is to be regretted that prices for farm products are at such a low point, brought about by over-production and under-consumption or both. However, this condition cannot always prevail and the low price of fertilizers and the use of modern labor-saving machinery will enable the farmer to keep his production costs down and be in a position to receive a reasonable profit on his crops when prices advance as they must do.

The fertilizer and implements we offer are adapted to conditions as they exist here in New England and prices are as low as is consistent with quality.

Yours for a prosperous season in 1932.

OLDS & WHIPPLE, INC.

Olds & Whipple, Inc.

List of Fertilizers and Raw Materials for 1932

O. & W.'s SPECIAL FERTILIZERS

Complete Tobacco Fertilizer	High Grade Potato and Vegetable Fertilizer
Blue Label Tobacco Fertilizer	Potato and General Purpose Fertilizer
High Grade Tobacco Starter	Double Strength Fertilizer
High Grade Tobacco Starter and Potash Compound	Corn Special Fertilizer
Top Dressing and Grass Fertilizer.	Lawn Fertilizer
Complete Market Garden Fertilizer.	

WILCOX FORMULA

Corn Special Fertilizer	Market Garden Fertilizer
Potato and General Purpose	Top Dresser

FERTILIZING MATERIALS

Swift Sure Phosphate.	Super Phosphate. (acid phosphate)
Swift Sure Bone Meal.	Sulphate of Ammonia.
High Grade C. S. Meal guaranteed analysis.	Nitrate of Soda.
Castor Pomace guaranteed analysis.	Sheep Manure.
Tobacco stems in bales.	Dry Ground Fish.
High Grade Muriate Potash.	Tankage.
High Grade Sulphate Potash.	Steamed Bone.
Nitrate of Potash.	Precipitated Bone Phosphate.
Carbonate of Potash.	Lime for Agricultural use.
	Fine ground Nova Scotia Plaster.

We offer our usual list of Special Formulas for all crops. We would call especial attention to our O & W High Grade Starter and Potash Compound to be used in conjunction with Castor Pomace or Cotton Seed Meal and when so used making a complete tobacco fertilizer. This combination has been extensively used during the past few years with most satisfactory results.

We again urge our customers to order their fertilizer at once and allow us to deliver same at an early date and thus avoid the mad scramble that always comes late in the season. There is no good reason for delay.

Our Special Mixtures for all Crops

The following pages give you a list of the special fertilizers which we manufacture at our own factory.

These special mixtures are from tested formulae, proved out by practical growing tests. They are finely ground, and mechanically, in such condition, as to render them readily available to the growing crops.

Their use will repay you. They produce the kind of crops that pay. Used and endorsed by best growers.

Fertilizing Cigar Leaf Tobacco

for Bigger Yields and Better Burning Quality

A good cigar depends upon its burning quality and flavor for its reputation. Leaf tobacco for making a good cigar must be of the best quality, must hold fire well, not burn too fast or too slowly. It must not coal on the cigar and it must leave a clear white or light gray ash, not a muddy ash.

Cigar smokers everywhere are complaining about the quality of the cigar being made today. Manufacturers cannot make good cigars unless they get good tobacco, and that is where the grower comes in.

Leaf-Wise

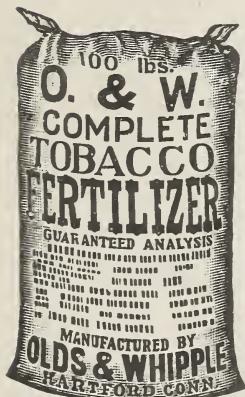
No matter how old a man is, if he is wise, he can still acquire more wisdom. No matter how old a grower is, he can still acquire more wisdom about a tobacco leaf.

The tobacco plant, perhaps more than any other plant, can be and is influenced for better or worse by proper or improper fertilization. In applying fertilizer, the grower must have two essential things in mind: 1, to preserve the productiveness of his soil; and 2, to produce leaf that has the most desirable qualities, namely, BURN — GRAIN — TEXTURE — and COLOR. This is a large order, but it can be successfully met by growers carefully studying the right fertilizers to use.

O. & W. Tobacco Fertilizer

To growers who desire a concentrated mixture, we offer this formula made along similar lines as our "Complete" Tobacco.

GUARANTEED ANALYSIS { 7% Nitrogen
3% Available Phosphoric Acid
7% Actual Potash



O. & W. Complete Tobacco Fertilizer

Thousands of tons of this formula are used up and down the Connecticut Valley, proved to be the best by years of experience. While we make many special formulae to suit the ideas of our customers, O. & W. COMPLETE leads them all in popularity. This formula is the result of years of experimenting on our own farms and is endorsed by buyers of the leaf which is the strongest kind of recommendation.

GUARANTEED ANALYSIS { 5% Nitrogen.
3% Available Phosphoric Acid.
5% Actual Potash.

Our Blue Label Brand Tobacco Fertilizer

This fertilizer carries 1000 lbs. of C. S. Meal in every ton, put up for the grower who desires a large amount of meal under his tobacco crop. The phosphoric acid and potash are derived from the same high grade sources as our Complete Tobacco Fertilizer.

GUARANTEED ANALYSIS { 6% Nitrogen.
3% Available Phosphoric Acid.
6% Actual Potash.

O. & W. High-Grade Tobacco Starter

This high grade starter has been used with conspicuous success by some of our best growers in the valley. We recommend that it be applied after the first timely hoeing. At that critical stage of growth an abundant supply of quickly available nitrogen enables the plant to get a vigorous start, overcome and grow away from any unfavorable condition that may exist.

Experience has taught us that the crop that grows quickly, vigorously and does not stop until it reaches maturity produces the best goods.

Apply about 500 lbs. per acre.

GUARANTEED ANALYSIS $\left\{ \begin{array}{l} 10\% \text{ Nitrogen.} \\ 3\% \text{ Available Phosphoric Acid.} \end{array} \right.$

O. & W. High Grade Tobacco Starter and Potash Compound

This formula with 5 per cent quickly soluble nitrogen and 15 per cent actual Potash should be used with C. S. Meal or Castor Pomace in growing the tobacco crop and when so used makes a complete fertilizer. The Nitrogen of C. S. Meal or Pomace is slow acting and on most lands a more quickly soluble form of Nitrogen is needed to start the crop. We recommend using 1000 to 1500 lbs. per acre with a ton of C. S. Meal or Pomace.

GUARANTEED ANALYSIS $\left\{ \begin{array}{l} 5\% \text{ Nitrogen.} \\ 4\% \text{ Available Phosphoric Acid.} \\ 15\% \text{ Actual Potash.} \end{array} \right.$

O. & W. Special Corn Fertilizer

This formula has been tested and tried in the cornfields of Connecticut and Rhode Island and produced excellent crops. It carries a high percentage of available phosphoric acid, necessary to promote hard grain and early maturity. It is also extensively used in market gardening.

GUARANTEED ANALYSIS $\left\{ \begin{array}{l} 3\% \text{ Nitrogen.} \\ 10\% \text{ Available Phosphoric Acid.} \\ 4\% \text{ Actual Potash.} \end{array} \right.$

O. & W. Complete Market Garden Fertilizer

This is one of our high grade special mixtures for use on Corn, Potato, Onion Crops, Market Garden and general purpose fertilizer.

The sources of plant food are such as are exceedingly available to the plant and best suited to promoting rapid and vigorous growth. Tested at our own farms we are able to speak authoritatively as to its merits. All growers will be repaid by using this special mixture on their Crop.

Our soils are well adapted to the culture of these Crops and to make them profitable as well, is an easy matter if the culture is supplemented and promoted by the use of our special fertilizer.

GUARANTEED ANALYSIS $\left\{ \begin{array}{l} 4\% \text{ Nitrogen.} \\ 8\% \text{ Available Phosphoric Acid.} \\ 4\% \text{ Actual Potash.} \end{array} \right.$

O. & W. Top Dressing and Grass Fertilizer

A complete fertilizer with all the essential elements for rapid and luxuriant growth, carrying both soluble salts and organic material, it is suitable both for top dressing or permanent seeding down mixture.

GUARANTEED ANALYSIS { 7% Nitrogen.
6% Available Phosphoric Acid.
6% Actual Potash.

O. & W. High Grade Potato and Vegetable Fertilizer

This is a concentrated mixture running high in analysis in every ingredient, and as a formula, is extensively used in the potato growing sections of Maine. To produce large crops of potatoes you must feed heavily of Potash. This was thoroughly proven during the war, as even when Potash was extremely high and scarce some of the Maine potato growers paid the price for this ingredient and were well repaid by increased crop.

GUARANTEED ANALYSIS { 5% Nitrogen.
8% Available Phosphoric Acid.
7% Actual Potash.

O. & W. Potato and General Purpose Fertilizer

This formula should be used in growing potatoes. The 4% Nitrogen content makes it practically the same as our 5-(ammonia) 8-7 of previous years and most agronomists agree that this is a proper balance for the potato crop. This formula is also extensively used in market gardening.

GUARANTEED ANALYSIS { 4% Nitrogen.
8% Available Phosphoric Acid.
7% Actual Potash

O. & W. Double Strength Fertilizer

A highly concentrated formula used principally in growing potatoes. Should be used at the rate of 1,000 to 1,200 lbs. per acre, being very careful that fertilizer does not come in contact with seed.

GUARANTEED ANALYSIS { 8% Nitrogen.
16% Available Phosphoric Acid.
14% Actual Potash.

We are now mixing Wilcox formulae, having 2 years ago purchased the mixed fertilizer business of the Wilcox Fertilizer Co., of Mystic, Conn. Wilcox fertilizers have always enjoyed a good reputation. It is our aim to maintain and enhance this reputation, making only such changes as recent scientific research has proved advantageous.

We offer the following Wilcox formulae:

Wilcox Corn Special

This is an old favorite, moderate in price, made of soluble materials, and producing fine crops.

GUARANTEED ANALYSIS { 3% Nitrogen.
10% Available Phosphoric Acid.
4% Actual Potash.

Wilcox Market Garden

This formula is deservedly popular in the great market garden section on Newport Island, Eastern Connecticut, Massachusetts and surrounding territory. Produces quick luxuriant growth and early maturity of vegetables.

GUARANTEED ANALYSIS { 4% Nitrogen.
8% Available Phosphoric Acid.
4% Actual Potash.

Wilcox Potato and General Purpose Fertilizer

Used extensively in growing potatoes and market garden truck, carrying a high percentage of potash needed in many crops.

GUARANTEED ANALYSIS { 4% Nitrogen.
8% Available Phosphoric Acid.
7% Actual Potash.

Wilcox Top Dresser

A standard mixture made of soluble materials for application to grass lands, used either as top dressing or seeding down.

GUARANTEED ANALYSIS { 7% Nitrogen.
6% Available Phosphoric Acid.
6% Actual Potash.

DESCRIPTIVE CATALOGUE and PRICE LIST
OF
Garden and Farm Seeds,
Agricultural Implements and
Fertilizers
for 1932

Important Notice—Free Delivery of Seeds

We Deliver, Transportation Paid in the U. S. and Possessions, Vegetable Seeds by the packet, ounce, quarter-pound, pound.

On larger quantities purchaser pays transportation. We also deliver, transportation paid, all Lawn Grass Seed mixtures in any quantity.

In making this Free Delivery offer we reserve the right to ship goods either by Parcel Post, Express or Freight.

We reserve the right to advance prices without notice should current conditions require it.

REMITTANCES

May be made by Express Money Order, P. O. Money Order or Check.

NOTE:—If cash or stamps are sent by mail, REGISTER THE LETTER, otherwise it travels at owner's risk.

C. O. D. ORDERS

If goods are wanted C. O. D., 25 per cent of the amount must accompany the order. Charges for returning the money will be collected on delivery.

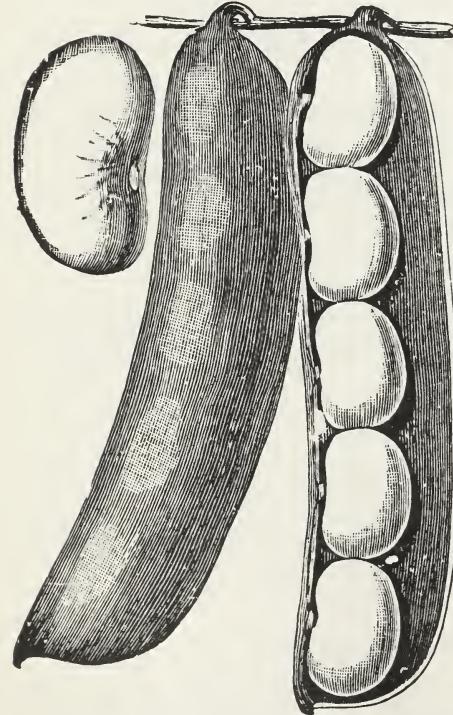
In accordance with the universal custom of the Seed Trade, Olds & Whipple, Inc. give no warranty, express or implied, as to description, quality, productiveness, or any other matter, of any Seeds they send out, and they will not be in any way responsible for the crop.

ASPARAGUS

An Asparagus bed may be made from one or two year old roots, planted in fall or spring. Plant the roots in rows four feet apart, leaving about twelve inches between plants in the row. Should be planted in trenches and gradually filled in as plants grow. Seeds may be sown in April in drills one foot apart and one inch deep. One ounce of seed will sow sixty feet of drill.

	Per Pkt.	Per $\frac{1}{4}$ lb.	Per 1b.
Mary Washington (seed)	.	.	\$0.10 \$0.40 \$1.25
Mary Washington roots	.	.	1.75 per 100

BEANS—Dwarf or Bush



Burpee's Bush Lima.

To produce a regular succession of crops through the season, plant every two weeks, from about beginning of May to end of summer. Plant in rows 18 inches apart, two inches deep; cultivate only when soil is dry, as the scattering of earth on vines will cause them to rust. One quart will plant 100 feet of drill and one and one-half bushels for one acre.

While we exercise the greatest care to have all seeds pure and reliable, we do not give any warranty, express or implied, and will not be in any way responsible for the crop.

	5 lb. lot 15 to 100 lb.		
	Per lb.	Per lb.	Per lb.
Burpee's Bush Lima.—A true bush form and immense cropper,	.	.	\$0.35 \$0.27 \$0.25
Fordhook Bush Lima.—	.	.	.35 .29 .28

	Per lb.	5 lb. lot Per lb.	15 to 100 lb. Per lb.
Improved Rust Proof, Golden Wax.—Early, long, round, stringless pods, . . . . .	.30	.25	.18
Black Wax, Pencil Pod.—Very early, round thick pods, . . . . .	.30	.25	.17
Wardwell's Kidney Wax.—Early, flat long wax pods, very fine, . . . . .	.30	.25	.18
Early Valentine.—Improved, true round green pod, . . . . .	.30	.25	.17
Bountiful.—Flat Green pods, stringless, . . . . .	.30	.25	.17
Burpee's Stringless.—Round Green pod, early, . . . . .	.30	.25	.17
Horticultural Dwarf.—Green pod, a superior shell bean, medium early, . . . . .	.30	.25	.18
French Dwarf Horticultural.—Pod 6 to 7 in. very attractive . . . . .	.35	.30	.20
Low's Champion.—Large green flat stringless pods, . . . . .	.30	.25	.18
White Kidney.—An excellent shell bean and for baking, green pod, . . . . .	.25	.20	.15
White Marrow.—A fine winter bean, . . . . .	.25	.20	.15
Red Kidney.—An excellent shell bean, similar to White Kidney, . . . . .	.25	.20	.15

BEANS—Pole

Plant in hills three to four feet apart, putting four or five beans in a hill, and leaving space in the center for the pole. One quart of limas will plant 100 hills. One quart of the smaller seeded sorts will plant about 200 hills.

	Per lb.	5 lb. lot Per lb.	15 to 100 lb. Per lb.
Extra Leviathan Lima.—An early and large variety, . . . . .	.35	.27	.20
Lima, Large White.—An old and choice variety, . . . . .	.35	.27	.20
Lima, King of the Garden.—Large and extremely productive, . . . . .	.30	.27	.20
Horticultural Cranberry.—Excellent quality, . . . . .	.30	.27	.20
Italian Horticultural.—Long pod, bright color, . . . . .	.35	.30	.25
Worcester or King Horticultural . . . . .	.30	.27	.20
Early Golden Cluster Wax Pole.—Early golden pods, large and tender, . . . . .	.35	.30	.25
Kentucky Wonder.—Green pod, very prolific, . . . . .	.35	.27	.20
Kentucky Wonder.—Wax or yellow podded, very prolific, . . . . .	.35	.30	.23

BEETS—Table Varieties

Sow from April to beginning of July, in drills about one foot apart, covering seeds about one inch. Thin the young plants when suitable size for greens to six or eight inches apart. One ounce sows 50 feet of drill, 5 to 6 pounds to one acre.

Quantity discount, 10 lbs. or more, .10 lb.	Per pkt.	Per oz.	Per lb.
Early Wonder.—Deep red, round, very popular with market gardeners, . . . . .	.10	.15	.90
Crosby's Egyptian.—Early smooth and fine quality, . . . . .	.10	.15	.75
Edman's Extra Early.—One of the best, . . . . .	.10	.15	.75

		Per pkt.	Per oz.	Per lb.
Early Eclipse. —Very early, dark red color, . . . . .		.10	.15	.75
Early Egyptian. —Good color, a smooth turnip beet, . . . . .		.10	.15	.75
Detroit Dark Red. —Smooth, bright red, good keeper, . . . . .		.10	.15	.90



Dewing's Early Blood Turnip.

Dewing's Early Blood Turnip. —A standard variety of excellent quality, . . . . .	.10	.15	.75
Long Smooth Blood. —An excellent late variety for winter use, . . . . .	.10	.15	.90
Swiss Chard. —Fine for greens, cultivated solely for leaves, . . . . .	.10	.15	.90

MANGOLD WURZEL

Sow in May or June in rows, 18 inches to 2 feet apart, and thin to 8 inches in the row. The value of these for stock feeding cannot be over estimated. Sow 6 to 8 pounds to one acre.

Quantity discount, 5 lbs. or more, .10 lb.	Per oz.	Per lb.
Carter's Mammoth Long Red. —A heavy cropper, one of the best, . . . . .	.10	.55
Norbiton Giant Long Red. —Very productive, . . . . .	.10	.55
Yellow Globe. —Large globular formed roots, good for shallow soils, . . . . .	.10	.55
Giant Half Sugar. —Rose shape and similar to Norbiton Giant, . . . . .	.10	.55
Golden Tankard. —A half-long variety of bright yellow color, . . . . .	.10	.55
White Sugar, Lane's Improved. —A well known variety, . . . . .	.10	.55

BROCCOLI

A vegetable resembling Cauliflower but much harder. Requires the same general culture as cabbage. One ounce of seed produces about 1,500 plants.

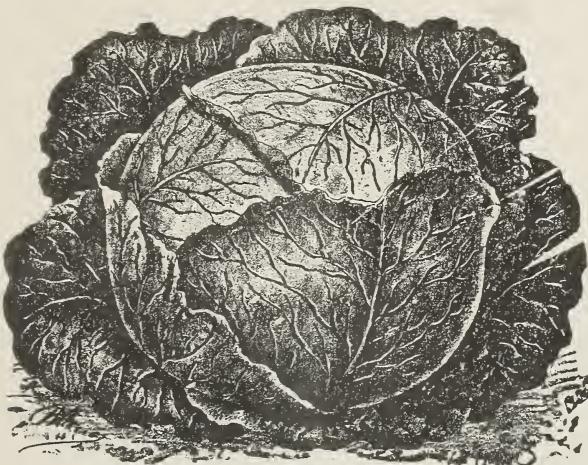
	Per pkt.	Per oz.
Purple Cape. —Medium size heads, hardy, . . . . .	.20	.65
White Cape. —Like Purple Cape, but of cream white color, . . . . .	.20	.65
Early Green Italian — or Calabrese, . . . . .	.20	.75
Italian Broccoli Rape or Senaps for bunching, . . . . .	.10	.25

BRUSSELS SPROUTS

A species of cabbage family and cultivated in about same manner. One ounce of seed will produce about 1,200 plants.

	Per pkt.	Per oz.
O. & W.'S Best	\$0.10	\$0.40

CABBAGE—Early



All Seasons.

All the Cabbage family require rich, deep, well-drained soil. For the early kinds, plant in rows 30 inches apart and 16 inches between the plants. For the late varieties, three feet between the rows and two feet between the plants. For very early use, sow in January or February in hot-beds. Set out when plants are strong enough into other hot-beds or set in cold frames in March. Transplant when danger from frost is past to open ground. The late, or winter crop seed can be sown in May and the plants set out when large enough.

To destroy the green worm that attacks the cabbage plant, use a solution of one ounce of saltpetre in three gallons of water. One ounce of seed will produce about 3,000 plants, one-quarter pound for one acre.

	Per pkt.	Per oz.	Per lb.
Golden Acre.—Extra early Copenhagen type,	\$0.15	\$0.35	\$4.00
Copenhagen Market.—Extra early round hard head, . . . . .	.15	.30	3.00
Early Jersey Wakefield.—A fine, very early medium sized market favorite, . . . . .	.10	.25	2.75
Early Summer.—A superior, second early, heads large and solid, . . . . .	.10	.25	2.75
Early Flat Dutch.—A fine early variety for family use, . . . . .	.10	.25	2.75
All Seasons.—Medium early, very large and sure header, . . . . .	.10	.25	2.75

CABBAGE—Late Varieties

		Per pkt.	Per oz.	Per lb.
O. & W. Premium Flat Dutch.—An extra fine selection of the large late Flat Dutch,	· · · ·	\$0.10	\$0.25	\$2.75
Improved American Drumhead Savoy.—Large, fine quality, excellent winter cabbage,	· · · ·	.10	.25	3.00
Stone Mason Drumhead.—A large round solid variety,	· · · ·	.10	.25	2.75
Red Dutch Drumhead.—Fine solid dark red heads,	· · · ·	.10	.25	2.75
Hollander, or Danish.—A superior winter variety, heads round, very hard, fine and tender,	· · · ·	.10	.25	3.00
Sure Head.—Large growing, fine heading, solid and large,	· · · ·	.10	.25	2.75
Chinese.—Select strain,	· · · ·	.10	.35	4.00
Chinese Chihili.—Long slender,	· · · ·	.10	.35	4.00



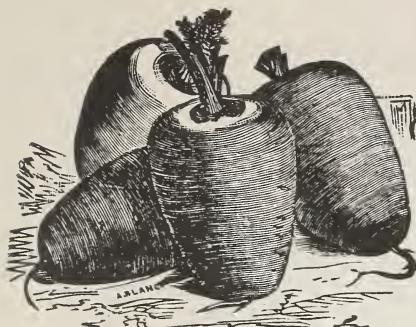
Paris Golden.

CELERY

Sow seed about the first of April in hot-bed or cold frame. Transplant four inches apart, when three inches high in rich soil; water and protect until well rooted, then transplant into rows 5 or 6 feet apart either on surface or in trenches 8 inches deep. Set the plants 10 or 12 inches apart. To blanch draw earth around the plants from time to time.

One ounce of seed will give about 4,000 plants.

		Per pkt.	Per oz.	Per lb.
Paris Golden, Self Blanching, (French).—An early golden variety, very popular,	· · · ·	\$0.20	\$0.75	\$10.00
Boston Market.—One of the best varieties in cultivation,	· · · ·	.10	.30	3.00
Celeriac.—Turnip rooted, used for salads and soups,	· · · ·	.10	.25	3.00
White Plume.—Easily bleached, usually solid and of a pleasing nutty flavor,	· · · ·	.10	.30	3.00
Golden Plume.—Popular Golden self-blanching,	· · · ·	.40	1.00	12.00
Winter Queen.—One of the best winter varieties,	· · · ·	.10	.30	3.00
Giant Pascal.—Second, early crisp, fine quality,	· · · ·	.10	.25	3.00
Easy Blanching.—White, solid, easily bleached,	· · · ·	.15	.35	4.00



CARROT

Carrots thrive best in rather light loam; soil should be well cultivated and well fertilized. Plant in rows 14 inches apart, and thin plants to 3 to 5 inches in the rows. Plant from the middle of April to the middle of May.

One ounce will sow 100 feet of drill.
3 to 4 pounds to one acre.

Quantity discount. 5 lbs or more. .10 lb.

Per pkt. Per oz. Per lb.

Early Half Long Nantes. —Stump-rooted, coreless, red color, . . . . .	.10	.15	.90
Chantenay. —A half-long, one of the finest for table use, . . . . .	.10	.15	.90
Danvers Half Long. —A most desirable variety, great keeper, . . . . .	.10	.15	.90
Hutchinson. —Large stump rooted, selected stock, . . . . .	.10	.20	2.00
Improved Long Orange. —A large long rooted variety, for stock purposes, . . . . .	.10	.15	.90
White Belgian. —Large, white, productive, for stock, . . . . .	.10	.15	.75

CAULIFLOWER

Is one of the most delicious varieties of the Cabbage family. Requires a rich deep soil, a low moist situation being desirable. Plants should be set in rows about 2 feet apart and 18 inches between the plants.

One ounce will sow a bed of 40 square feet and produce about 2,000 plants.

Per pkt. Per $\frac{1}{2}$ oz. Per oz.

Early Snowball. —This ranks extremely high among the early varieties, it is a reliable header of good size and of rich white color, . . . . .	.20	.50	1.50
Erfurt Early Dwarf. —A good variety, . . . . .	.20	.50	1.50
Early Paris. —A standard early variety, . . . . .	.10	.50	1.25

CORN—Field

West Branch Sweepstakes.—Big-eared Dent, a popular ensilage variety

Eureka.—A well known ensilage variety of White Corn. Very leafy, of extra large growth, and we believe will produce more tons of silage than any other variety. For ensilage only,

Leaming's Early Dent.—A very popular Dent Corn, grown for both grain and ensilage. This variety will mature in this latitude,

Early Yellow Dent.—Connecticut grown, a dent corn that will mature in this latitude,

Longfellow.—Yellow flint corn, a well and favorably known variety, large long ears

Improved 8 Row Yellow Flint.—Earlier than Longfellow

at market prices.

CORN—Sweet

Requires a rich warm soil. For early varieties plant when ground has become well warmed; successive plantings may be continued until July. Plant in hills from 3 to $3\frac{1}{2}$ feet apart, according to the height of variety.

One quart will plant 200 hills; 8 quarts for one acre in hills.

		Per lb.	5 lb. lot Per lb.	15 to 100 lb. Per lb.	
Extra Early Golden —10 days earlier than Golden					
Bantam, best extra early yellow,		\$0.30	\$0.25	\$0.18	
Golden Sunshine .—Week earlier than Golden Bantam, . . . . .	.30	.25	.18		
Columbia .—Earliest white variety, . . . . .	.30	.23	.17		
Whipple's Yellow .—Early as golden bantam but much larger, fine quality, . . . . .	.30	.23	.17		
Whipple's White .—Early and good quality, . . . . .	.30	.23	.17		
Golden Bantam .—A yellow sweet corn, extra early and extra hardy, very tender and sweet. . . . .	.30	.23	.17		
Golden Giant .—Cross between Golden Bantam and Howling Mob, . . . . .	.30	.23	.17		



Whipple's Yellow.

Crosby's Early .—An old favorite, early and of excellent quality, . . . . .	.30	.23	.17
Howling Mob .—Excellent quality early large ears, . . . . .	.30	.23	.17
New Champion .—Fine early quality with large ears, . . . . .	.30	.23	.17
Bantam Evergreen .—Yellow, medium early, large size, . . . . .	.30	.23	.17
Evergreen .—A standard late variety, . . . . .	.30	.22	.16
Long Island Beauty .—Large late and one of the best, . . . . .	.30	.23	.17
Mammoth Sugar .—Extra large sweet variety, of good quality, . . . . .	.30	.23	.17
Black Mexican .—An early, tender corn of fine flavor, . . . . .	.35	.25	.20

Use O. & W. Complete Market Garden Fertilizer for Corn

CRESS

To be planted in drills and sown quite thickly, on good rich ground, in early spring.

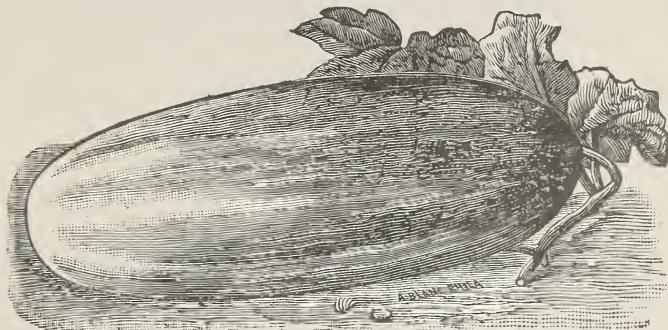
One ounce of seed will plant 100 feet of drill.

	Per pkt.	Per oz.	Per lb.
Curled .—	\$0.10	\$0.15	\$0.75

CUCUMBER

First planting should be made in May when ground is dry and warm, in hills about 4 feet apart; thin out to 3 to 4 plants to the hill when established. For pickles plant during the last two weeks in June.

One ounce will plant 50 hills; two pounds for one acre.



Improved Early White Spine.

	Per pkt.	Per oz.	Per lb.
Early Cluster.—Bears in clusters, early and productive,	.10	.15	\$1.00
Snow Pickling.—One of the best pickling,	.10	.15	1.00
Green Prolific.—The very best pickling sort,	.10	.15	1.00
Boston Pickling.—Produces an abundant crop of dark green color,	.10	.15	1.00
Improved Early White Spine.—A standard variety of uniform good size and color,	.10	.15	1.00
Early Fortune.—Excellent for slicing or Pickling,	.10	.15	1.00
Davis Perfect.—Dark green, good length, popular,	.10	.15	1.15
Longfellow Dark Green.—Largest slicing very attractive market sort	.10	.25	2.00
Improved Long Green—A large and late variety,	.10	.15	1.15

DANDELION

Sow in May in drills 12 inches apart, covering seeds about one-half inch deep. Cultivate to keep down weeds during summer and the following spring leaves will be suitable for cutting. Must be covered in winter to protect from frost.

One ounce for 100 feet of drill. One pound for one acre.

	Per pkt.	Per oz.	Per lb.
Improved Thick-Leaved.—Standard sort, very productive,	.15	.45	\$5.00
French Garden.—	.10	.25	2.50

DILL

	Per pkt.	Per oz.	Per lb.
Mammoth or Long Island.—	.10	.15	.75

EGG PLANT

Plant the seed in hot beds early in spring. Transplant when two inches high into another bed, or small pots. Plant in garden when weather is settled and warm. Should be placed about 3 feet apart, and well watered for 2 or 3 days, until they show signs of being rooted.

	Per pkt.	Per oz.
New York Improved Purple.—The leading market variety, excellent and very productive.	.15	.40
Black Beauty.—Early, fruit black, round and solid,	.15	.40

ENDIVE

For early use, sow as soon as ground can be worked in spring in drills fifteen inches apart; thin plants to six inches in the row. Any ordinary soil will do, but a moist place is preferred. To blanch the leaves, gather them together when dry and tie with matting or cover with ordinary flower pots inverted.

One ounce will produce about 3000 plants.

			Per pkt.	Per oz.	Per lb.
Green Curled. —A standard sort,	.	.	. \$0.10	. \$0.15	. \$1.00
Moss Curled. —Very ornamental,	.	.	. .10	. .15	. 1.00
Batavia Escarolle.—	.	.	. .10	. .15	. 1.00

KALE or German Greens

Plant the larger varieties in hills two by three feet apart and thin to one plant to the hill. Requires deep, rich soil. Set out plants in June and treat in same manner as for cabbage.

One ounce will produce 2,000 plants.

			Per pkt.	Per oz.	Per lb.
Green Curled Scotch. —Leaves of bright green, very tender and closely curled,	.	.	. \$0.10	. \$0.15	. \$1.00
German Greens. —To be sown in fall for spring use,	.	.	. .10	. .15	. .75

KOHL RABI

An intermediate vegetable between the cabbage and turnip. Prepare as for cabbage. Sow in April in rows 18 inches apart and thin out to 8 inches apart.

One ounce gives 3,000 plants.

			Per pkt.	Per oz.	Per lb.
Early White Vienna. —A standard early,	.	.	. \$0.10	. \$0.15	. \$1.75
Early Purple Vienna. —Very large and productive,	.	.	. .10	. .15	. 1.75

LEEK

Sow the seeds in April and transplant in July to rows 15 inches apart and 8 inches between plants.

One ounce will grow 1,000 plants.

			Per pkt.	Per oz.	Per lb.
American Flag. —A hardy and profitable sort, excellent for winter use,	.	.	. \$0.10	. \$0.20	. \$1.75

While we exercise the greatest care to have all seeds pure and reliable, we do not give any warranty, express or implied, and will not be in any way responsible for the crop.

LETTUCE



Boston Market.

Lettuce needs a rich and moist soil, should be sown in rows about 12 inches apart and the plants thinned to 10 inches apart for the heading varieties. When not grown for head they may be sown broadcast. The more rapid the growth, the better the quality.

One ounce for 3,000 plants.

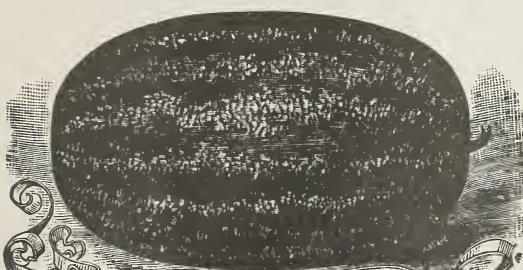
	Per pkt.	Per oz.	Per lb.
May King. —Medium size, early, good heading, a popular sort, . . . . .	.10	.20	1.50
Early Curled Silesia. —Sweet, early, good variety, . . . . .	.10	.20	1.50
Early Simpson. —Early, compact mass of tender leaves, . . . . .	.10	.20	1.50
Black-Seeded Simpson. —Large light-colored head variety, . . . . .	.10	.20	1.50
Hanson. —Large, solid, crisp head, one of the best outdoor sorts, . . . . .	.10	.20	1.50
True Iceberg. —Light green heads, . . . . .	.10	.20	1.50
Tennis-Ball Black Seeded. —Excellent for early large heads, . . . . .	.10	.20	1.50
Tomhannock. —One of the best varieties for broadcast cultivation, leaves slightly bronzed, . . . . .	.10	.20	1.50
Crisp as Ice. (Bronzed) a fine bronze leaf lettuce, . . . . .	.10	.20	1.50
New York Number 12. —Commonly called Iceberg. . . . .	.10	.25	2.00
Big Boston. —A head lettuce, for forcing or open culture, . . . . .	.10	.20	1.50
White Boston. —Commonly called green leaved Big Boston . . . . .	.10	.20	1.50
Cos or Romaine.— . . . . .	.10	.20	1.50

MUSTARD

Sow from April to June in drills one foot apart and cover seed lightly. Used principally for salads.

	Per oz.	Per $\frac{1}{4}$ lb.	Per lb.
White or English. —For salad or medicinal purposes, . . . . .	.10	.20	.45
Brown. —More pungent than white, . . . . .	.10	.25	.75

MELON—Water

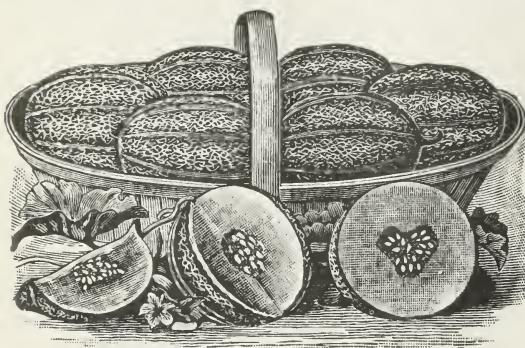


Ice Cream.

A warm light sandy loam preferred. Being tender should not be planted before middle of May. Plant in hills 5 to 6 feet apart each way for the musk varieties and 8 feet apart for the water. Cover seeds about one-half inch deep and when well started thin out to 3 plants in a hill. One ounce will plant about 15 hills; 4 pounds to the acre.

	Per pkt.	Per oz.	Per lb.
Cole's Early. —Round, striped, delicious flavor, red flesh, good size, . . . . .	.10	.15	1.00

	Per pkt.	Per oz.	Per lb.
Kleckley's Sweet.—Oblong in form, dark green, thin rimmed, flesh bright scarlet, white seed, sweetest of all,	\$.10	\$.15	\$1.00
Mountain Sweet.—An old standard variety, early and solid, . . . . .	.10	.15	1.00
Phinney's Early.—Early, reliable, red fleshed, productive, . . . . .	.10	.15	1.00
Ice Cream.—White seeds, medium size, solid fine flavor, one of the most popular varieties grown, . . . . .	.10	.15	1.00
Kolb's Gem.—Flesh bright red, almost round, grows large, very choice, . . . . .	.10	.15	1.00
Citron for Preserves.— . . . . .	.10	.15	1.00



MELON—Musk

One ounce will plant 80 hills; 2 to 3 pounds for one acre.

While we exercise the greatest care to have all seeds pure and reliable, we do not give any warranty, express or implied, and will not be in any way responsible for the crop.

Rocky Ford Melon.

	Per pkt.	Per oz.	Per lb.
Honey Rock.—Round heavily netted thick salmon flesh	\$.10	\$.20	\$1.50
Hackensack.—Large, productive and good flavor, green fleshed,	\$.10	\$.15	\$1.25
Rocky Ford.—A very popular variety, flesh light green, sweet and delicate flavor, . . . . .	.10	.15	1.25
Bender's Surprise.—Large, slightly oval, good quality, pink flesh, . . . . .	.10	.20	1.50
Hearts of Gold.—Round medium early, pink flesh, . . . . .	.10	.15	1.25
Miller's Cream.—Thick meated and salmon colored flesh, delicious, . . . . .	.10	.15	1.25
Paul Rose.—An extra quality, salmon flesh, medium size, . . . . .	.10	.15	1.25
Emerald Gem.—Small, but prolific, yellow meated, superior quality, . . . . .	.10	.15	1.25
"Lake Champlain."—Improved Emerald Gem, . . . . .	.10	.15	1.25
Osage, Salmon Fleshed.—A deliciously sweet melon of fine flavor, . . . . .	.10	.15	1.25

NASTURTIUM

Cultivated for both use and ornament. Young seeds may be used as capers and leaves for salad purposes. The beautiful flowers, blooming freely all summer add a charm to the garden and lawn. Plant in May.

	Per pkt.	Per oz.	Per $\frac{1}{4}$ lb.
Tall.—An ornamental climber,	\$.10	\$.15	\$.35
Dwarf.—Fine for borders and beds, . . . . .	.10	.15	.35

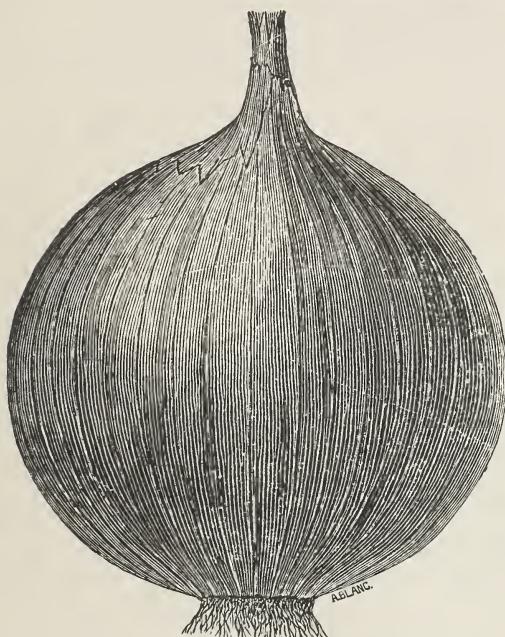
OKRA

Plant in rows 2 feet apart, thinning plants to 1 foot apart in the row.

	Per pkt.	Per oz.	Per lb.
Dwarf Green.—Early and productive,	\$.10	\$.15	\$.50

ONION

(Strictly new seed—Prices subject to change.)



Southport Red Globe.

The onion thrives best in deep, loamy soil, well fertilized. Sow the seeds thinly in drills 1 foot apart. Cover seeds about $\frac{1}{4}$ inch, roll and tread soil down solidly. When 3 inches high, thin out to 3 inches apart. Cultivate well and keep out weeds.

One ounce seed will sow 100 feet of drill. Six pounds for one acre.

Per pkt.	Per oz.	Per lb.
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Wethersfield Large Red.—A large yielder, excellent to keep,	· · · · ·	\$.10	\$.20	\$1.65
Southport Red Globe.—Finest large red sort,	· · · · ·	.10	.20	1.75
Southport Yellow Globe.—Handsome and late variety,	· · · · ·	.10	.20	1.65
Southport White Globe.—Early, mild flavored, large, not a good keeper,	· · · · ·	.15	.25	2.25
Yellow Globe Danvers.—One of the superior yellow globe varieties,	· · · · ·	.10	.20	1.65
White Portugal.—Excellent for pickling, should be sown thick,	· · · · ·	.10	.25	2.25
Prize Taker.—Yellow skin, white flesh, good cropper, large size,	· · · · ·	.10	.20	1.75
Japanese or Ebenezer.—(For growing sets),	· · · · ·	.10	.20	1.75

ONION SETS

Should be planted as early as the ground can be worked in rows 12 inches apart. Set each about 3 inches apart. When onions are grown from sets they can be used in the green state in June, or will ripen by July.

Red	at market prices.
White	.	.	.	.	.	.	.	.	.	.	.	.
Yellow	.	.	.	.	.	.	.	.	.	.	.	.

PARSLEY

Sow early in spring in drills 1 foot apart, covering lightly; thin out the plants to 3 to 4 inches apart; used for flavoring and garnishing. A single row forms a good edging for flower-beds or walks.

		Per pkt.	Per oz.	Per lb.
Moss Curled.—Very ornamental and productive,	.	\$0.10	\$0.15	\$0.90
Curled, or Doubled.—A most beautiful variety, moss-like leaves of handsome bright green color,	.	.10	.15	.90
"Plain" Leaved.—(Not curled),	.	.10	.15	.85
Hamburg.—Turnip rooted,	.	.10	.15	.90

PARSNIP

Make the soil very fine and plant the seed very early, in rows eighteen inches apart, thinning plants to three or five inches in the rows; seeds should be covered about one-half inch deep.

Parsnips, aside from table use, have great value for stock-feeding purposes. Are improved by allowing to remain in open ground through the winter.

One ounce to 100 feet of drill; five pounds for one acre.

		Per pkt.	Per oz.	Per lb.
Ideal Hollow Crown.—A great cropper, tender and sweet,	.	\$0.10	\$0.15	\$0.75
Long Smooth White.—One of the best for general cultivation,	.	.10	.15	.75

PEAS

The wrinkled varieties, while the sweetest of all peas, are more liable to rot, being tender, and need to be planted thicker and later than the round, hard sorts. Soil needs to be well manured. Have the dwarf varieties in rows two and one-half feet apart; those kinds growing two to three feet high, in rows three feet apart, and the tallest in rows four feet apart. The smooth varieties may be sown as soon as ground can be worked; the wrinkled sorts when soil is well warmed.

One quart to 100 feet of drill; one and one-half bushels to an acre.



Carter's Premium Gem.

	5 lb. lot	15 to 100 lb.	
	Per lb.	Per lb.	Per lb.
East Hartford Extra Early.—True stock, 2½ feet, best early variety in the market, smooth variety	\$0.30	\$0.23	\$0.16

	Per lb.	5 lb. lot	15 to 100 lb.
	Per lb.	Per lb.	Per lb.
Gradus, or Prosperity. —An extra early wrinkled pea, very large pods, of magnificent quality,	\$0.30	\$0.23	\$0.17
Nott's Excelsior. —A wrinkled dwarf, of excellent variety, early, . . . . .	.30	.23	.17
Sutton's Excelsior. —Similar to Nott's Excelsior, but producing larger and more abundant pods, . . . . .	.30	.23	.17
Daisy or Dwarf Telephone. —Dwarf habit, wrinkled, large pods, second early, . . . . .	.30	.24	.18
Thomas Laxton. —Of similar growth to Gradus, a few days later, pods are deep rich green. In the judgment of many the Thomas Laxton is even sweeter and finer flavor than Gradus, . . . . .	.30	.23	.17
Telephone. —Four feet high, large peas of rich, sugary flavor, . . . . .	.30	.24	.18
Champion of England. —An old standard variety, late, five feet high, . . . . .	.30	.23	.17
Laxtonian. —Large dark green pod, best early dwarf, . . . . .	.30	.24	.18
Canada Field. —For stock purposes, (60 lbs. to the bushel,)		at market price	

PEPPER

Should be started in hot beds, and transplanted into open ground by end of May; set in rows eighteen inches apart and plants about twelve inches apart in the rows.

One ounce of seed will produce about 3,000 plants.

	Per pkt.	Per oz.
Sweet Mountain. —Largely grown for both market and home use,	\$0.10	\$0.40
Bull Nose. —This has long been the standard hot sort, . . . . .	.10	.40
Ruby King. —Most popular large red pepper in cultivation, . . . . .	.10	.40
Large Squash. —Thick fleshed, early hot variety, . . . . .	.10	.40
Long Red Cayenne. —The true Cayenne, hot and pungent, . . . . .	.10	.40
Small Red Cherry. —A small smooth and round variety; productive, . . . . .	.10	.40
World Beater. —Large mild, very prolific, . . . . .	.10	.40
Chinese Giant. —Large mild, . . . . .	.15	.50
California Wonder. —(New) Large size, thick shell, mild, . . . . .	.15	.50

While we exercise the greatest care to have all seeds pure and reliable, we do not give any warranty, express or implied, and will not be in any way responsible for the crop.

PUMPKIN

To be cultivated in same manner as squash.		Per oz.	Per lb.
Small Yellow Sugar.—A handsome prolific variety, good keeper, best for pies,	•	\$0.15	\$0.80
Large Cheese.—Very large and good keeping variety,	• . .	.15	.85
Connecticut Yellow Field.—Grown largely for stock purposes,		.10	.75

POTATOES—Northern Grown

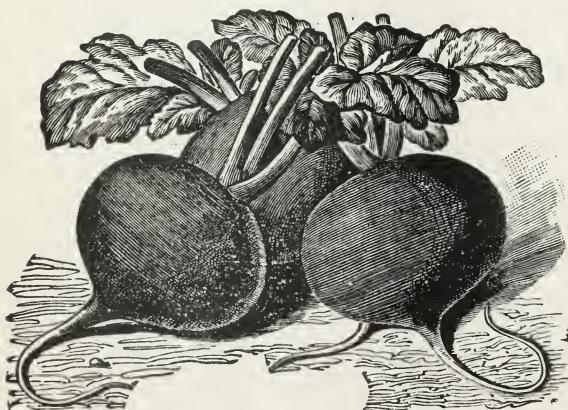
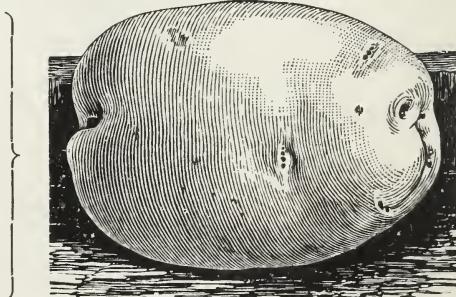
(MAINE and PRINCE EDWARD ISLAND CERTIFIED)

Use 16 to 20 bushels, or 6 barrels per acre. (See pages 34 and 35 for description of varieties.)

We offer only certified seed and the varieties listed below are the only varieties that are certified in Maine.

Here in Conn. nearly all markets demand Green Mountains for winter stock. This is the variety that agricultural authorities are always trying to improve and we believe it to be the best variety grown.

Irish Cobbler
Green Mountain
(Improved)
at Lowest Market
Prices.



Deep Scarlet Turnip.

Quantity discount, 5 lbs. or More, .10 lb
Early Scarlet Turnip.—Round red with white tip,

RADISH

For early use sow in spring as soon as ground can be worked. Sow in drills six to ten inches apart and thin out to one inch apart in the rows; as the roots are more tender and brittle when grown quickly, a rich light soil is preferred. For a succession sow every two weeks.

One ounce will sow 100 feet of drill; eight pounds for one acre.

Per pkt.	Per oz.	Per lb.
	\$0.10	\$0.15

	Per pkt.	Per oz.	Per lb.
Deep Scarlet Turnip.—An all red standard variety, .	.10	.15	.75
Early Long Scarlet, Short Top.—The standard early long variety, .	.10	.15	.75
French Breakfast.—Most popular variety, of olive shape, red with white tip, quick growing, .	.10	.15	.75
Scarlet Globe.—One of the best; quite early, very crisp,	.10	.15	1.00
White Turnip.—For summer and winter use, .	.10	.15	1.00
Black Spanish Long.—Black skin, white flesh—a winter variety, .	.10	.15	.80
Round Black Spanish.—The favorite German winter radish,	.10	.15	.80
Rose Color China Winter.—Grows large and tender, good for winter use, .	.10	.15	.80

RHUBARB

Propagate from roots in richly prepared soil. Plants should be set five feet apart.

Victoria Giant—	\$.25 a root
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SALSIFY, or Vegetable Oyster

Sow early in spring in light rich soil in drills fourteen inches apart and thin out to three inches apart in the row. The roots will be ready for use in October. When cooked the flavor resembles the oyster.

	Per pkt.	Per oz.	Per lb.
Sandwich Island Mammoth.—This variety grows to an unusually large size, roots tender and good flavor, .	.10	.25	\$1.75

SPINACH

For very early spring use sow in August, for summer use sow in early spring, in drills about ten or twelve inches apart, covering the seed one inch deep. To obtain a succession sow at intervals of two weeks through the season. One ounce to 100 feet of drill, 10 pounds to one acre.

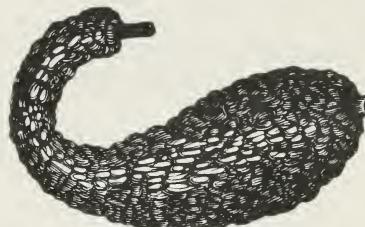
	Per oz.	Per $\frac{1}{4}$ lb.	Per lb.
Savoy Leaved.—Early, wrinkled and hardy, reselected, .	.10	.20	.40
Round Thick Leaf.—Produces dark thick leaves, somewhat crumpled, .	.10	.20	.40
Large Viroflay.—Grows extra large size, reselected, .	.10	.20	.40
Princess Juliana.—Improved long season one of the best summer spinach, .	.10	.20	.40
King of Denmark.—Summer spinach, .	.10	.20	.40
New Zealand.—A very productive spreading plant, .	.15	.25	1.00
Nobel Giant Leaved .	.10	.25	.40

Ask for prices in larger quantities.

SQUASH

Requires rich, warm soil. Plant in hills nine to ten feet apart for running varieties, and five or six feet apart for bush sorts. Leave two or three plants to a hill. Cultivate frequently.

One ounce will sow twenty to forty hills; two to four lbs. per acre.



Summer Crookneck.

	Per pkt.	Per oz.	Per lb.
Giant Summer Straightneck.—	\$.10	\$.20
Early Summer Crookneck.—The finest bush variety,10	.15
Giant Summer Crookneck.—Larger than the early summer,10	.15
Early White Bush Scallop.—Matures early and bears continuously,10	.15
			1.00



Hubbard Squash.

Hubbard.—The well known and most popular winter squash,	. . . . .	.10	.15	1.30
Boston Marrow.—A bright orange colored squash for autumn, very productive,	. . . . .	.10	.15	1.00
Mammoth Chili.—Extra large, grows upwards 100 pounds at times,	. . . . .	.10	.20	1.50
Golden Hubbard.—Similar to the standard Hubbard but smaller and earlier and of a golden red color,	. . . . .	.10	.15	1.30
Cocozelle.—Compact bush growth, fruit oblong, foot or more in length, skin dark green with stripe,	. . . . .	.10	.15	1.30
Blue Hubbard.—Popular variety,	. . . . .	.10	.15	1.50
Table Queen.—Fine for baking,	. . . . .	.10	.20	1.65

TOMATO



Livingston's Beauty.

Sow the seed in March or April in hot bed. Transplant when plants are five inches high to open ground, after danger from frost has passed. Should be set four feet apart each way, on mounds of earth, to allow foliage to open and sun to reach the fruit.

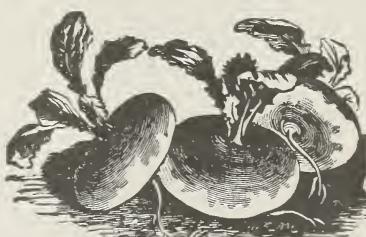
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		Per pkt.	Per oz.	Per $\frac{1}{4}$ lb.
Spark's Earliana. —The earliest large red grown, exceedingly productive,10	.30	\$1.00
Bonnie Best. —Very early, vigorous grower, smooth, brilliant, scarlet fruit, very prolific, . . . . .		.10	.30	1.00
Marglobe. —(New) Midseason globe shaped scarlet, . . . . .		.15	.35	1.25
Livingston's New Stone. —Large, smooth, solid, scarlet color, . . . . .		.10	.25	.85
Acme. —A standard variety, round, bright pink in color, . . . . .		.10	.30	1.00
Ponderosa. —Largest variety grown, . . . . .		.15	.50	1.75
New Dwarf Champion. —Most popular of dwarf varieties, fruit deep purplish red, . . . . .		.10	.40	1.35
Yellow Plum. —Small, elegant, fine for preserves, . . . . .		.15	.60	2.00

TURNIP

For early varieties sow as soon as the ground can be worked in spring.

For fall and winter use, seed should be sown from the middle of July to middle of August, seed generally sown broadcast, using one pound to the acre.



Early Flat Dutch.

Quantity discount, 5 lbs. or more, .10 lb.

		Per oz.	pkt.	Per $\frac{1}{4}$ lb.	Per lb.
Early Purple Top Milan. —Finest early, . . . . .		.15		.25	\$0.80
Early Flat Dutch White. —A popular market variety, . . . . .		.10		.20	.60
Purple Top Strap Leaf. —One of the standard flat varieties, . . . . .		.10		.20	.60
Yellow Globe. —Fine for table use, fall and winter, . . . . .		.10		.20	.60

		Per oz. pkt.	Per $\frac{1}{4}$ lb.	Per lb.
Golden Ball.—Very tender, fine flavored,	.	.10	.20	.60
White Egg.—Handsome, oval form, thin skin,	.	.10	.20	.60
Cow Horn.—Pure white, except at top,	.	.10	.20	.60
Purple Top White Globe.—A thick, round, quick growing variety,	.	.10	.20	.60

RUTA-BAGA

Seed should be sown in drills thirty inches apart, thin out to one foot apart in the row.

		Per oz. pkt.	Per $\frac{1}{4}$ lb.	Per lb.
American Purple Top Swede.—Flesh deep yellow, free growing,	.	.10	.20	.65
White Rock or Sweet German.—White and sweet, a good keeper,	.	.10	.20	.65
Long Island Purple Top.—Yellow turnip of best quality,	.	.10	.20	.65

HERBS

		Per pkt.	Per oz.
Summer Savory,	.	.10	.50
Sage,	.	.10	.40
Sweet Marjoram,	.	.10	.50
Thyme,	.	.10	.50
Dill,	.	.10	.20

SWEET PEAS

	Per pkt.	Per oz.	Per $\frac{1}{4}$ lb.	Per lb.
Spencer Mixed, large flower with long stem,	.	.10	.15	.45

TOBACCO

We are very careful in the selection of our tobacco seed, growing much of it on our own farm and saving the seed from only such plants as bear the correct type of leaf. We buy only of the most reputable growers. This seed is thoroughly blown which removes all the light seed, as we believe the heavier seed makes the strongest plants.

	Per $\frac{1}{4}$ oz.	Per oz.	Per lb.
Willow Brook Broadleaf.—Specially grown and selected,	.25	.50	7.00
John Williams' Broad Leaf,	.25	.50	7.00
Havana. Special selected type, round point leaf, very choice,	.25	.50	7.00
Cuban Type, shade grown,	.40	.75	9.00
Round Tip, (not Havana)	.40	.75	9.00

While we exercise the greatest care to have all seeds pure and reliable, we do not give any warranty, express or implied, and will not be in any way responsible for the crop.

**It Pays to use
OUR COMPLETE FERTILIZER
FOR THE TOBACCO CROP.**



A very fine crop of Broadleaf Tobacco grown on O. & W. Fertilizer
by A. L. Killiam, South Glastonbury, Conn.



Broadleaf Tobacco grown on O. & W. Fertilizer
by D. W. Andrews, South Glastonbury, Conn.

How to Make a Better Lawn

Building for permanence requires the use of *good lawn seed*, but even the best of seed must have a fair chance. Neglect of proper preparation of the seed bed may not show the first few months, but sooner or later will make it necessary to do the whole job over again. Start right — prepare the soil well — *sow good seed* — and have a good lawn — from now on.

Re-Seeding

Every lawn, regardless of how thick the sod may be, is benefited by a light seeding Spring and Fall. Sow about half the quantity recommended for a new lawn. This is particularly advisable in the Fall which is Nature's seeding time. Bare spots should be dug up, fertilized and re-seeded. Thin spots may be scratched up with an iron rake, seeded, top dressed and rolled.

Choice of Seed

A good lawn grass mixture should be composed of nothing but true turf grasses in the right proportions, carefully recleaned to remove dirt, chaff and weed seeds as much as possible. Avoid mixtures containing cheap grasses which do not belong in a lawn. The cost of the seed is the smallest item in the making of a good lawn; it pays to choose good seed.

Sowing

Use plenty of seed. Remember a thick grass sod is the best protection against weeds. To insure even distribution, which is important, divide the seed in half and go over the ground twice, making the second sowing at right angles to the first. Sow on a calm day so the wind will not blow the seed.

O. & W. Lawn Grass Mixture

Is composed exclusively of the best seeds of the choicest fine bladed grasses free from weeds. Sow a pound to every 200 sq. ft. (equals a space ten by twenty feet) double the quantity may be used without harm.

Price per lb. 35c., 2 lbs. 65c., 5 lbs. \$1.50, 10 lbs. \$13.50, 100 lbs. \$25.00.



O. & W. Special Lawn Grass Mixture

Price per lb. 50c., 2 lbs. 95c., 5 lbs. \$2.25, 10 lbs. \$4.40, 50 lbs. \$21.00, 100 lbs. \$40.00.

Evergreen Lawn Grass Seed

Price per lb. package 40c, 2 lbs. 75c, 5 lbs. \$1.75
10 lbs. \$3.25



Shady Places

In spots shaded by trees or buildings, give special attention to fertilizing and watering and sow a special shady place grass mixture. Remember that trees and shrubbery draw heavily on the food and water in the soil, so extra quantities of both must be provided to keep the grass supplied.

Shady Spot Lawn Grass Seed

Price per lb. 50c., 2 lbs. 95c., 5 lbs. \$2.25, 10 lbs. \$4.40, 50 lbs. \$21.00, 100 lbs. \$40.00.

O. & W. Special Lawn Fertilizer

For Spring and Early Summer Treatment

To maintain a luxuriant lawn, proper fertilizing is necessary.

The old method of applying stable manure, so objectionable because it carries weed seeds as well as being unsightly and odorous, is no longer practiced. We manufacture a lawn dressing carrying all the essential plant foods so necessary to produce luxuriant growth and dark, rich, green color so much desired.

We recommend for lawns that it be used at rate of 100 lbs. for 5,000 sq. ft.

PRICES (Delivered):

100 lbs.	50 lbs.	25 lbs.	10 lbs.	5 lbs.
\$3.25	\$1.80	\$1.05	\$0.65	\$0.35

Special prices on larger quantities.

We also have for Lawns and Gardens:

	100 lbs.	50 lbs.	25 lbs.	10 lbs.	5 lbs.
O. & W. Special Garden Fertilizer	\$3.00	\$1.75	\$1.00	\$0.60	\$0.35
Bone Meal	3.00	1.75	1.00	.60	.35
Sheep Manure	3.15	1.75	1.00	.60	.35
Superphosphate	2.00	1.25	.75	.40	.25
Nitrate of Soda	4.00	2.25	1.35	.75	.40
Hard Wood Ashes	2.75	1.60	.90	.60	.35
Lime	1.50	.85	.50	.30	.25
Tobacco Dust	3.50	2.00	1.25	.65	.40
Alphano Humus	1.50	.95	.50	.30	.25
Tobacco Stems	\$1.75 per 100 lbs., in bales of 200 or 300 lbs.				

Special Prices on larger quantities.

Imported Granulated Peat Moss (Turf Mull)

A plant requires as much as 95% of moisture for its growth, and there is no better medium to supply this, than peat moss. The high absorbing quality of peat moss retains at the same time the fertilizing properties of all commercial or natural fertilizers, manures and plant food.

Peat moss comes in bales (20 x 22 x 40") which contains about 20 bu. One bale will cover about 250 sq. ft. 1" deep.

Price per bale \$3.50

5 bale lots \$3.25 each



1 lb. can	\$0.25
5 lb. can	.50
10 lb. bag	.85
25 lb. bag	1.75
50 lb. bag	3.25
100 lb. bag	6.00

Loma is odorless, clean — many times more powerful than barnyard manures. So easy to apply. It is sown over the lawn like grass seed — then wet down. That's all there is to it. A 5-pound package fertilizes a 10 ft. x 10 ft. plot.

Water Weight Lawn Rollers

At least one rolling a year is necessary to preserve a healthy turf. This should be done early in the spring, as soon as the ground is dry, to re-firm the soil about the roots after it has been loosened and heaved up by the freezing and thawing of winter. The roller should weigh 150 to 300 pounds, depending on the texture of the soil.

The water weight lawn roller has almost entirely superseded the old fashioned cast iron roller. By regulating the amount of water it can be made to weigh as desired.



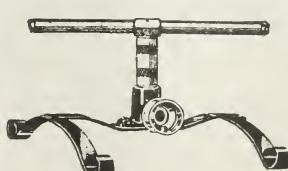
Diameter	Width of Drum	Weight Empty	Weight Full	Net Price
Plain bearing.....14 in.	24 in.	68 lbs.	175 lbs.	\$10.50
Plain bearing.....18 "	24 "	82 "	265 "	12.00
Roller bearing.....24 "	24 "	110 "	420 "	16.00
Roller bearing.....24 "	32 "	130 "	565 "	20.00

The Pennsylvania Ball Bearing Lawn Trimmer

This meets the demand for a serviceable tool to take the place of grass shears and other devices for cutting the grass left at the edge of lawns after mowing. The Trimmer will cut within three-eighths of an inch of wall or tree trunk and mow any border wide enough to run one wheel on. Its construction is similar to all the other Pennsylvania products—Crucible Tool Steel in both cylinder and stationary blades. Self-sharpening. Ball bearings with patented Pennsylvania adjustment. Built for service and long life. Light running. Easy to handle. Price \$10.50 net.



We carry a complete line of hose, sprinklers, shears, rakes, etc.

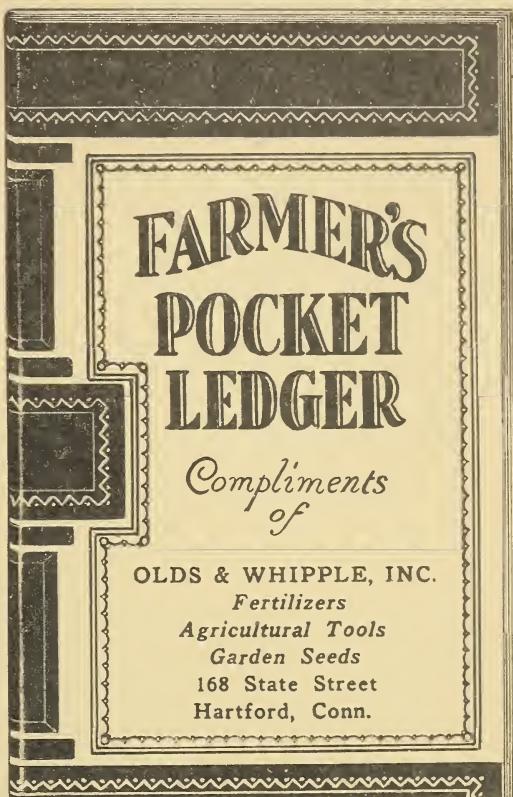


IT MEETS THE FARMER'S NEEDS AND FITS HIS POCKET

Valuable Pocket Ledger Reserved For You

This little pocket size book is chock-full of useful information.

It is a source of constant reference by the Farmer. It provides tabular ruled sheets on which he can keep his crop record and other pages adequate for his bookkeeping needs. This Pocket Ledger is free. Just fill out self-addressed postcard on which postage will be paid by us.



Please send me a Farmer's Pocket Ledger (Free).

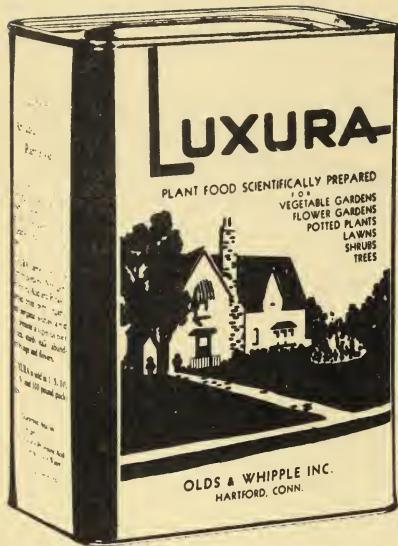
I am interested in items checked "X". Send me information and prices.

..... Mixed Fertilizer.	..... Seed Potatoes.
..... Fertilizer Raw Materials.	..... Field Seeds.
..... Agricultural Implements.	..... Garden Seeds.

Name

Post Office

Shipping Point on R. R.



LUXURA

An Ideal Complete Plant Food

LUXURA is a scientific blending of plant foods necessary to promote luxuriant growth of flowers, shrubs, vegetables, fruit and shade trees.

LUXURA carries, in the right proportions, Nitrogen, Phosphoric Acid and Potash, derived from both organic and inorganic sources and will promote a vigorous root system, sturdy stalk, abundant foliage and flowers.

LUXURA is sold in 1, 5, 10, 25, 50 and 100 pound packages.

Guaranteed Analysis: $\begin{cases} 5\% \text{ Nitrogen} \\ 8\% \text{ Available Phosphoric Acid} \\ 6\% \text{ Potash Soluble in Water} \end{cases}$
Net Weight, — Pounds

FIRST CLASS
PERMIT No. 402
(Sec. 384½ P. L. & R.)
Hartford, Conn.

BUSINESS REPLY CARD

No Postage Stamp Necessary If Mailed in U. S. A.

2c.—POSTAGE WILL BE PAID BY—2c.

OLDS & WHIPPLE, INC.

HARTFORD,

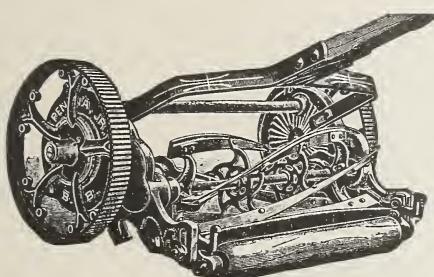
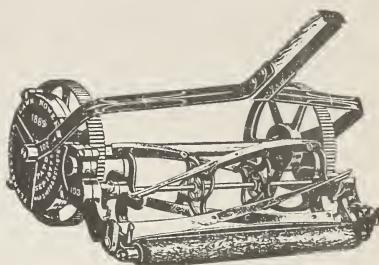
CONN.

Drawer 2077.

Lawn Mowers

The Standard Pennsylvania is the pioneer of all lawn mowers, having an open cylinder, open wheels and a train of gears.

Width of cut 15 in. 17 in. 19 in. 21 in.
Price \$24.00 \$27.50 \$31.00 \$34.50

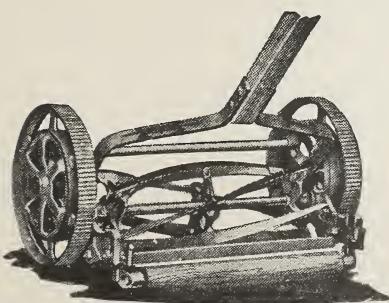
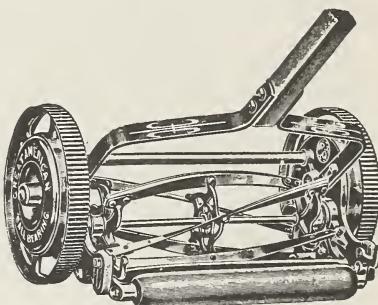


The Pennsylvania Jr. Ball Bearing has all the good points of the Standard Pennsylvania, with the addition of some features that make it the most perfect grass cutter in the world.

Width of cut 15 in. 17 in. 19 in. 21 in.
Price \$24.00 \$27.50 \$31.00 \$34.50

The Great American Ball Bearing is the best all-round mower of its type made. The perfectly fitting ball cups and cones insure an easy running machine.

Width of cut 15 in. 17 in. 19 in. 21 in.
Price \$16.50 \$18.50 \$21.50 \$24.50



Wm. Penn a type of lawn mower that will give good service and satisfaction on any kind of a lawn.

Width of cut 16 in. Price \$16.00

O. & W. Mowers, a good mower at a low price.

Width of cut 14 in.	Price \$ 8.00
" " " 16 in.	" 10.00
" " " 18 in.	" 12.00

List of Grass, Clover and Millet Seed

(At market Prices)

Timothy, or Herd's Grass. One of, if not the commonest and best known grasses. Very valuable for hay. Perennial, fibrous and often bulbous rooted. (45 lbs. to the bushel).

Red Top. Is a fine permanent grass. Often sown with timothy and red clover, in which case the clover soon disappears to be replaced by timothy, which in turn gives way to the red top. Very valuable in mixtures for permanent pastures.

Chaff Red Top 10 lbs. to the bushel. Fancy or cleaned 35 lbs. to the bushel.

Kentucky Blue Grass. Also called June grass. Root-creeping, perennial, flowers in June. It requires about two to three years to become well set and does not arrive at perfection as a pasture grass until the third or fourth season. (14 lbs. to the bushel.)

Orchard Grass. A perennial grass, flowers from June to July. Very valuable for pastures, also in connection with timothy and clover for hay crops. When used with timothy use one bushel orchard and 8 lbs. clover. If sown alone use three bushels to the acre. (14 lbs. to the bushel.)

Sudan Grass. A quick growing annual. A forage crop of great value. Stools freely. Grows 3 to 5 ft. tall, two and sometimes three crops can be cut. Grows until frost. When sown broadcast use 25 lbs. per acre.

Rhode Island Bent. Root-creeping, perennial, flowers in July. Very valuable for lawn purposes. Sow from three to four bushels to the acre. (10 lbs. to the bushel.)

Large Red, or Mammoth Clover. Grows from four to five feet high; stocks so coarse that cattle will eat but leaves only, but by its judicious use, exhausted lands may be reclaimed. (60 lbs. to the bushel.)

Medium Red Clover. The most important of all the varieties of clover for the practical purposes of agriculture. Sown with timothy and other grasses it produces desirable hay or pastures. (60 lbs. to the bushel.)

White Clover. The value of this clover is well known; it is found in most every natural pasture. It is adapted to all soils. Being deep-rooted it withstands drought when grown on dry, sandy sections. It should form a part of all mixtures for permanent pastures. (60 lbs. to the bushel.)

Alsike, (Clover). This is one of the hardy varieties. It resists cold, extreme drought and wet, and on rich warm soils yields immense crops of hay, or pasture of good quality. (60 lbs. to the bushel.)

Alfalfa (Clover). A heavy forage crop doing well in almost all localities. Requires well limed soil and good drainage.

Hungarian (grass) Millet. Splendid forage crop for light land. On rich land two crops may be grown the same season. Withstands drought and yields abundantly. (48 lbs. to the bushel.)

Golden, or German Millet. A heavier cropper than the Hungarian, and needs a longer season and a stiffer soil, stands up well, is easily cured, makes a coarse, harsh hay, which is greedily eaten by all kinds of stock. (50 lbs. to the bushel.)

Japanese Millet. This is by many considered the most valuable of all forage plants. It makes more hay than German millet or any other. Although it grows large, sometimes seven or eight feet high, the hay is of excellent quality. It is adapted to all sections.

Use O. & W. Special Grass Fertilizer
The Fertilizer That Makes Grass Grow.

Leguminous Plants as Soiling Crops

All the leguminous plants (peas, clovers and beans, etc.,) have the power of taking up the free nitrogen in the air and converting it into available forms of ammonia so very valuable as a fertilizing ingredient to the soil.

Therefore the roots (or, as in some cases where the entire plant is turned under) provides a large supply of available ammonia for the crops which are to follow.

Cow Peas,	.	.	.	.	.	at lowest market prices
Soja Beans (Soy Beans),	.	.	.	.	"	"
Mammoth Clover,	.	.	.	.	"	"
Medium Clover,	.	.	.	.	"	"
Vicia Villosa, or Hairy Vetch,	.	.	.	.	"	"

GRAINS

Barley,	.	.	.	.	.	at lowest market prices
Japanese Buckwheat,	.	.	.	.	"	"
Rye,	.	.	.	.	"	"
Seed Oats,	.	.	.	.	.	at market price

Canada Field Peas. Grown largely with oats as fodder crop. At market prices.

Use "O.&W" Special Grain and General Crop Fertilizer

Legume Inoculation HUMOGERM

The Best Inoculation for All Legume Seeds Means Better Crops, Better Soils, Less Fertilizer Expense

Seeds of all Legumes — Clovers, Alfalfa, Sweet Clovers, Garden Peas, Beans, and Sweet Peas, Vetches, Soy Beans, etc. — will yield far better results if inoculated with HUMOGERM, and in addition, leave in the soil a heavy deposit of nitrogen which benefits all succeeding crops. No other inoculant will produce the wealth of nodules obtained by using HUMOGERM. We believe in inoculation, we favor the soil medium, and we believe in HUMOGERM. Of all the inoculants manufactured, we believe it is the most effective, and cheapest, consistent with high quality.

WHAT HUMOGERM IS: A culture of bacteria especially selected and bred for maximum vitality and ability to take nitrogen from the air. They are carried in a sterilized, finely ground, porous humus medium that keeps them fresh, active and vigorous. Economical and easy to use, HUMOGERM is a sensible insurance and a profitable investment.

HOW TO ORDER: Specify crop and number of bushels you wish to inoculate (one-bushel size contains sufficient bacteria to thoroughly inoculate one bushel of designated variety of legume seed).

PRICES ARE LOW. For small seeds — Clovers, Sweet Clovers, Alfalfa, etc.

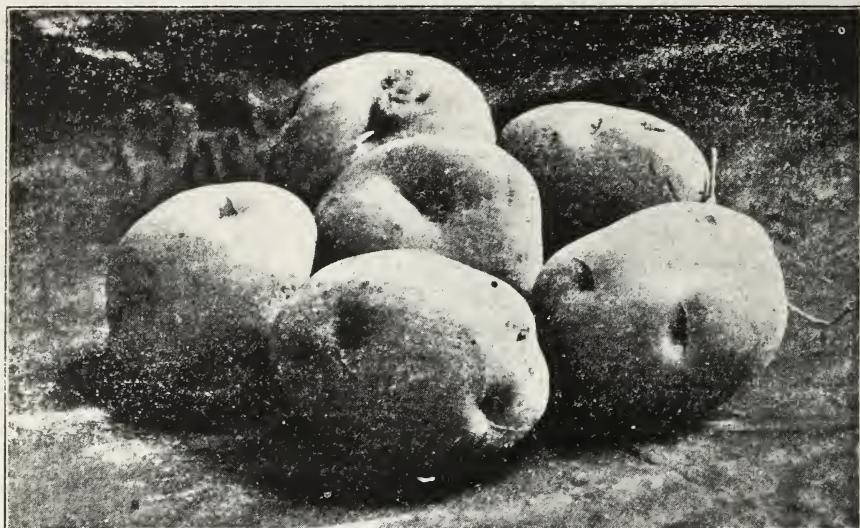
1/4-bus. size	.	.	\$0.35	1 -bus. size	.	.	\$1.00
1/2-bus. size	.	.	.60	2 1/2-bus. size	.	.	2.25

New reduced prices on cultures for large-size seeds — Soy Beans, Cowpeas, Peas, Beans, Vetches, etc.

1/2-bus. size	.	.	\$0.35	1 -bus. size	.	.	\$0.60
				5-bus. size	.	.	\$2.25

Special Garden Size for Garden Peas, Beans, and Sweet Peas, 25 cts.





Northern Grown Certified Seed Potatoes

Certified Irish Cobbler.—An excellent extra early variety, will mature in seven weeks from time of planting; in color pure white with deep eyes, usually of good cooking quality.

Certified Improved Green Mountain.—This variety is too well known to require any description; it is recognized as the standard of excellence in all New England; white skinned, oval formed, smooth and attractive and a good yielder.

Don't waste labor and fertilizer on poor seed. Get the best.

Our certified seed potatoes have been carefully selected from fields in Aroostook County, Maine and Prince Edward Island.

Prince Edward Island Certified Seed Potatoes have set the standard for America. Beginning in 1918, when only one carload of Certified Seed Potatoes was shipped, the industry in Prince Edward Island has had a phenomenal growth.

The climate of Prince Edward Island is ideal for the production of potatoes. There is rarely a drought, and never excessive rains. The temperature ranges from 64 to 80 degrees, and fogs are unknown. The soil is of a red sandstone formation, naturally somewhat acid, free from stones and rocks, has good drainage, all of which are favorable and important factors.

The potato, while widely grown in the United States on many different kinds of soil, does better on certain types of soils than others.

If one were attempting to describe an ideal soil for potatoes, it would be about as follows: The soil should work easily and not get in poor physical condition after heavy rains; should be well supplied with organic matter or humus; and should be well drained but possess a good water-holding capacity, due to the presence of organic matter on the one hand and a proper proportion of the fine soil constituents, silt and clay, on the other. The soil should possess a good physical condition to some depth to enable the roots of the potato plants to enter the soil readily and allow for proper tuber development.

**It Pays to use
O. & W. High Grade Potato Fertilizer**



On the farm of Ernest Reichart, South Manchester, Conn. Part of 20 acres, Prince Edward Island Cobblers and Green Mountains, grown on O. & W. High Grade Potato Fertilizer.



Miller Bros., Wapping, Conn., Raised 90 acres of Potatoes on O. & W. High Grade Potato Fertilizer.

THE IMPORTANCE OF SPRAYING

Our Agricultural Colleges and Experimental Stations backed by both the State and Federal Governments have been largely instrumental in awakening the general public to the real importance of spraying. This has been accomplished through numerous bulletins and circulars issued from time to time and distributed by tens of thousands, so that first hand and reliable spraying information has been sent out broadcast into every nook and corner of the United States. In fact, so thoroughly has the matter of spraying been investigated and advertised, that no one today is ignorant of its importance, but, there are yet those who have not given it attention for different reasons, while others are profiting by this neglect and getting better prices right along for their products.

"Better Fruit and more of it" has become the slogan of every fruitman for it means higher prices for his crops. But this also means better care of his trees and vineyards — higher cultivation and protection from the enemies of tree, plant and vegetable life by proper fertilization, pruning and spraying at the right periods. In fact, spraying is now considered so important that practically all fruit offered for sale today in the public markets is of the sprayed kind. No other will do. Unsprayed fruit is usually small, knotty and spotted and cannot compete with the sprayed article, even if sold at a much lower price.

PLANT AND TREE ENEMIES

Two kinds of enemies attack fruit trees and plants, namely; insects and fungous diseases. The application of substances, usually liquid, to the tree or plant for the purpose of preventing or destroying these constitutes spraying, insecticides being used for the insects and fungicides for the fungous growths. We spray to destroy insects and to prevent fungous diseases. For convenience, injurious insects are usually divided into two classes, based upon their feeding habits; eating or chewing insects and sucking insects.

FEEDING HABITS OF INSECTS

Chewing insects are those having jaws by means of which they bite off and eat portions of the tissues of the plant, such as foliage, fruit buds, tender bark, etc. Examples of this class are — the codling-moth which causes wormy apples, the plum curculio, the potato "bug" or beetle, caterpillars, etc. Most of the insects of this class are very easily controlled by applying to their food arsenical poisons, such as Paris green and arsenate of lead which is placed within their feeding range to be found by them sooner or later. It is with this class that success depends greatly upon spraying at the proper time; for example, the codling-moth caterpillar may be killed if there is some poison on the apple just as the insect eats its way in, but after once getting into the fruit it is safe.

Sucking insects are those furnished with a beak or slender tube with which they pierce the plant tissue and suck out the sap. Examples of this class are San Jose scale, oyster scale, scurfy scale, aphis, plant lice, etc. These insects are safe from poisons because we cannot get any poison into their food and must be killed by a direct application of such insecticides as will kill by contact, of which the most common is lime sulphur. In fighting this class of insects very thorough work is required, for every individual insect must be hit by the spray.

FUNGOUS DISEASES

Fungous diseases are parasitic consisting of plants or growths of low form, which live on other living plants. Examples, apple and pear scab; black, brown and bitter rot, mildew, etc. These diseases are disseminated almost wholly by the means of spores, which are extremely small, disk-like bodies corresponding to the seed of higher plants and are usually borne on the surface. These spores are produced in great abundance and each one is capable of starting a new fungus. They are carried from one plant to another by means of wind, water and insects. For fungous diseases, then, a spray is required which will kill the spores and the important point is to commence spraying with fungicides before the disease presents itself, as spraying for fungous diseases is a preventive rather than a cure. For this purpose the combination of lime and blue vitrol, known as Bordeaux mixture, is the principal remedy. Here again thoroughness is of the utmost importance.

Insecticides and Fungicides

Arsenate of Lead Powder. Can be used for dusting (mixed with Hydrated Lime) or spraying to kill most chewing insects on Plants, Trees, Shrubs, etc.

Bee Brand Insect Powder. Ground from pyrethrum flowers, harmless to mankind and domestic animals. For use against mosquitoes, bed bugs, lice on fowls, ants, roaches, moths, flies, fleas, and many other insect pests.

Black-Leaf "40". A concentrated solution of Nicotine Sulphate — For spraying to destroy sucking insects.

Bordeaux Mixture. Powdered. A mixture of Copper Sulphate and Lime, used to control all fungus and blight on low crops and grapes.

Bug Death. A non-poisonous insect killing powder, for worms, bugs and caterpillars.

Calcium Arsenate Powder. A poison for chewing insects on potatoes and other low crops. (Do not use on trees or grapes).

Copper Sulphate. (Blue Stone).

Crow Repellent. Non-poisonous, used to protect corn after planting from birds and animal pests.

Dry Mix. A sulphur lime casein mixture used as a spray for diseases on fruit trees.

Emulso. An oil emulsion applied at dormant or delayed dormant on trees for the control of red mite, aphis, scale, etc.

Fly Spray Liquid. For protection of horses, cattle, dogs and hogs from flies, mosquitoes, fleas and lice.

Koloform. A superfine Dry Mix. containing Colloidal Sulphur.

Lime Sulphur Solution or Lime Sulphur Powdered. For dormant spraying of fruit and shade trees also bushes against San Jose and Oyster Shell Scales, also for peach leaf curl and brown rot of peaches.

Monohydrated Copper Sulphate. Mixed with lime it is used as a dust for blight control, mostly on potatoes.

Paris Green. Used principally in poison bran mash for cut worms, etc.

Pyrethrol. A concentrated insecticide for killing the Japanese beetle, also useful against many other garden, hothouse, orchard, farm and house pests.

Ryrox For the control of insects and blights on low crops and grapes.

Red Arrow Insect Spray. A concentrated Liquid Insecticide.

Wetex. A superfine Dry Mix with Lead Arsenate for spraying all trees for the control of insects and diseases.

Dusting

The Modern Method Of Crop Protection

The rapid strides which the dusting method of crop pest control has made in the past four or five years is directly traceable to the efforts of the Niagara Sprayer Company. Its success, however, has come because it has done those things which were claimed for it, and brought results by the most direct route.

Dusts of infinite fineness have been perfected, containing those properties necessary to kill insect pests and prevent diseases. Not only do the Dusts do the work done by liquid sprays, but their development has opened new fields of Crop Pest Control.

Niagara Dusts are now being made that stick "through Wind and Rain," and exhibit toxic properties to many fungi and insects heretofore unequaled by either wet or dry materials.

Niagara Dusting Materials



POMO-GREEN. A fine green powder for the control of black spot and mildew, does not show up on the foliage.

5 lb. pkg. \$1.75; carton (5-5 lb. pkgs.) \$7.00; 50 lb. drum \$11.00; 100 lb. drum \$20.00.

Nicotine Pomo-Green. 5 lb. pkg. \$3.00

DORMANT DUST. (In metal drums 50 lbs. each). Delayed dormant dusting for San Jose scale, red mite and aphis on apples, pears, and shade trees.

SULFODUST. (In bags). Dusting Sulphur with special spreader and sticker, fineness 95%, 200 mesh. For apple scab, brown rot, etc. Standard fruit dust fungicide.

KOLODUST. (In bags). A new dust developed by the Niagara Sprayer Co. It is sulphur fused with bentonite at high temperature and the product is koloized (a colloidal form). This produces a dust of infinite fineness much finer than 300 mesh, which experiment stations have proven more toxic to fungous diseases than any sulphur yet produced.

KOLOTEX. (In bags). A Sulphur Poison dust that will stick. The New Exclusive Niagara Sulphur Fungicide with Lead Arsenate.

KOLOKIL. (In bags). A Sulphur Heavy Poison Dust.

KOLOPEACH. (In bags). A Sulphur Small Poison content Dust suitable for dusting peaches and other stone fruits.

A-1 MIXTURE. (In metal drums). A Contact Poison Dust. High percentage of quickly volatile nicotine fumes. 3% actual 100% nicotine. For aphids, red bugs, pear psylla, etc. The best contact dust for sucking insects, both out doors and green-houses.

P. A. DUST. (In metal drums). Used same as A-1, contains 4% actual 100% nicotine.

VITIDUST. (In metal drums). Copper, Lime, Lead Arsenate. Mixture for grapes.

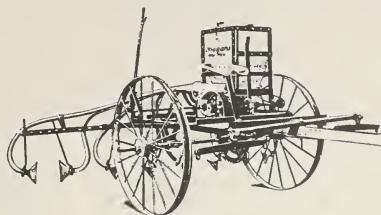
COPODUST. (In metal drums). A Copper-Lime Dust. The New Exclusive Niagara Copper Lime Fungicide for blights of potatoes, and other field crops.

COPOTEX. (In metal drums). A Copper Lime Dust, with Poison added for potato bugs, etc.

WILDFIRE DUST. (In metal drums). A Copper Lime Dust for tobacco.

NIAGARA DUSTING MACHINES

For Vegetable and Fruit Crops



The "Dri-Fog" Crop Duster (4 row, 8 nozzle or 6 row, 12 nozzle) is the most recent addition to Niagara's complete line of Dusts and Dusters.

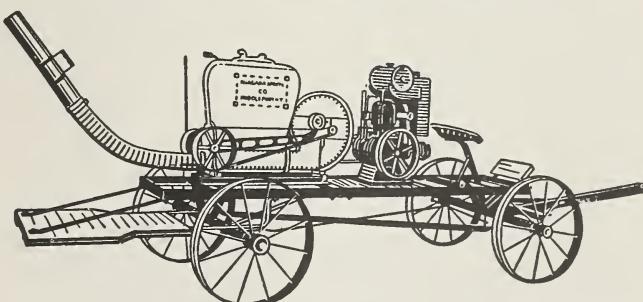
This great crop duster is a new machine in every respect — in design, construction and performance.

Nothing has been overlooked that would simplify the crop dusting method, reduce the time and labor necessary for each job, reduce the cost and give the utmost efficiency in preventing ravages of pests and diseases.

HERE ARE THE REASONS WHY — The "Dri-Fog" Crop Duster is the Superior of All Crop Dusters

1. It will govern accurately the poundage of material to be distributed, and feed this dust to the distributing system at the rate of 5 pounds to 110 pounds of Niagara Potato Dust per acre.
2. The distributor will divide this dust so that each side of every row will be covered with the same amount of dust.
3. The DRI-FOG is constructed so simply that all units are easily accessible for adjustment and repair.
4. The DRI-FOG is substantially built for operation on rough lands, yet so lightly built that it will not be another "horse-killer" on the farm.
5. More than anything else the DRI-FOG will develop air velocity and air volume to break up the dust and carry it in a penetrating cloud to all parts of the plants, so that every part will be covered with the same thickness of dust film.

Price \$250.00. Net Cash Price \$237.50.



Niagara Model F Fruit Duster mounted on truck equipped with a 6 to 10 H.P. Twin New Way engine or 6 H.P. two cylinder Novo engine. Prices on application.

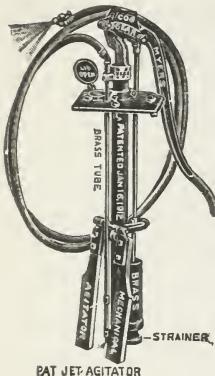


Niagara Blower Gun Crank Type,
Brush Feed, Price \$17.50 Net Cash
Price \$16.63.

2 row "Y" attachment, Price \$2.25 net.

Niagara Hand Plunger Gun, Price
\$1.00 net.

Myers Barrel Spray Pumps



No. R318B — Myers Cog Gear Barrel Spray Pump, complete with one lead of 15 feet of $\frac{1}{2}$ inch 5 ply discharge hose, graduating Vermorel nozzle, and mechanical agitator for closed head barrel.

Price \$16.00.

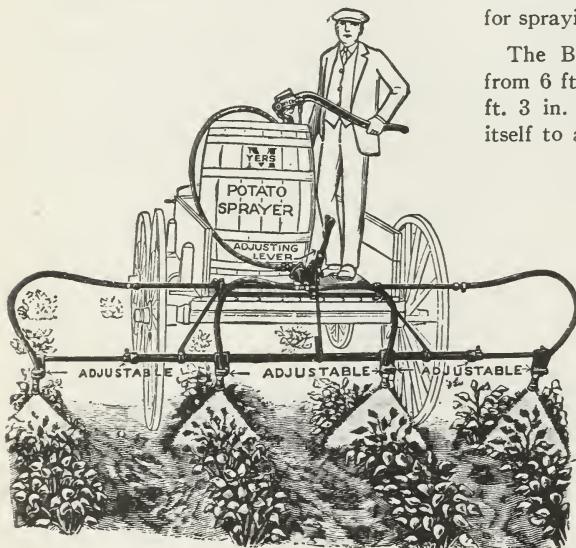
Net Cash Price \$15.20.

No. R305B — Myers Cog Gear Barrel Spray Pump with both jet and mechanical agitators, complete with 15 feet of $\frac{1}{2}$ inch 5 ply spray hose and Myers graduating Vermorel nozzle for open head barrel.

Price \$15.00.

Net Cash Price \$14.25.

Myers No. 6 Overhead Four Row Adjustable Potato Sprayer, mounted on plank that bolts to bottom of wagon box, and is complete with all hose and nozzles. The adjustable features adapt it to any kind of work or condition — nozzles adjustable in width to suit any width row and are so arranged that they discharge the spray either directly downward on top of the plant or either forward or backward as desired — can be raised or lowered a distance of 20" for spraying small or large plants.



The Boom is adjustable in width from 6 ft. 1 in. narrowest point to 11 ft. 3 in. widest point, thus adapting itself to any and all conditions. Will

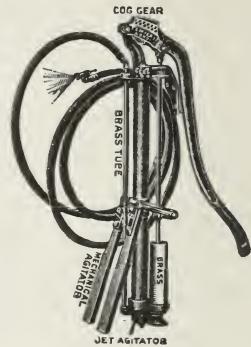
pass through a 7 ft. gate. Can be used in connection with any Barrel Spray Pump. The cut at left shows Myers No. R318 Spray Pump being used with this sprayer.

Price \$20.00.

Net Cash Price \$19.00.

FIG. 480

Figure 480 illustrates iron pipe extension made of $\frac{1}{4}$ in. steel pipe threaded at both ends. Price 4 ft. length with coupling 50¢. Price 8 ft. length with coupling 80¢.



The Myers Cog Gear Spray Pump

(Double Acting)



With brass valves and ground bevel brass seats, 2" seamless brass removable cylinder, hemp packed plunger and double lever shut-off discharge.

SPECIAL FEATURES: Cog Gear Movement increases the leverage, adapting it for spraying under heavy pressure. Mounted complete. Occupies smallest possible space. Capacity sufficient for 8 nozzles. An ideal outfit for spraying potatoes. Will set in an ordinary farm wagon box.

No. R316 C Pump complete, 50 gallon barrel mounted as shown, with pressure gauge, two 15 ft. leads of $\frac{3}{8}$ in. 7 ply discharge hose, two Fembro nozzles, two 8 ft. pipe extensions with lever shut-offs and mechanical agitator.

Price \$60.00.
Net Cash Price \$57.00.

No. R336 B. Myers Portable Sprayer

Complete as shown in illustration, with dasher agitator, 15 feet $\frac{1}{2}$ in. 5 ply discharge hose, 8 foot extension and Vermorel nozzle.

Price \$25.00.

Net Cash Price \$23.75

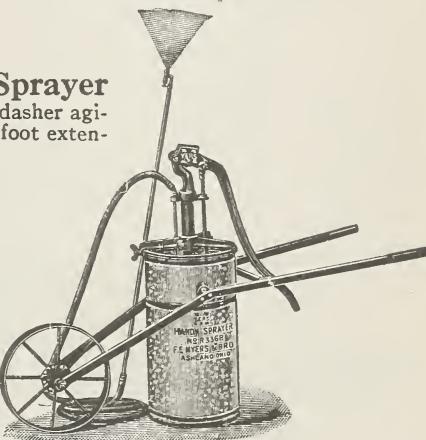
No. R324

Myers Cog Gear Lever Bucket Spray Pump

With agitator, complete with detachable hose and graduating Vermorel fine sprinkling and solid stream nozzle.

Price \$6.00.

Net Cash Price \$5.70.



No. 327½ Myers Little Giant Brass Bucket Spray Pump

With agitator, complete with hose and imperial combination fine, coarse spray and solid stream nozzle, with malleable foot rest.

Price \$4.00.

Net Cash Price \$3.80.



Hudson Perfection Sprayer

Combines all the essential features of a successful compressed air sprayer. The tank is riveted and soldered, the pump is all brass, the nozzle is the most satisfactory shut-off nozzle made, it will close tight under any pressure and there is consequently no leakage. It will handle all solutions.

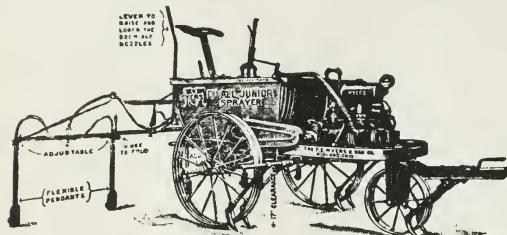
Prices. \$4.00, \$6.00 and \$9.00.



Meyers Du-All Duplex Power Sprayers

These "Du-All" Sprayers are particularly adopted to be used by the average farmer who raises fruit, potatoes or other rowed crops, as the one rig serves all purposes.

To use as an orchard sprayer, remove the boom.



No. 1089 Du-All Junior with 150 gallon tank, self oiling double acting spray pump, 4 row spray boom with 12 nozzles, doubletree and neckyoke, 4 H. P. engine complete as shown. Price \$325.00.

Net Cash Price **\$308.75.**

Extras for Du-All Sprayers.

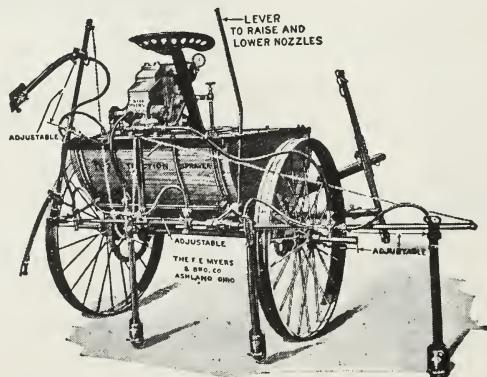
Orchard Attachment—Price \$22.25. Net Cash Price **\$21.15.**

Vine lifter with pin break hooks. Price \$22.00. Net Cash Price **\$20.90.**

Hydraulic Tank Filler. Price \$27.00 Net Cash Price **\$25.65.**

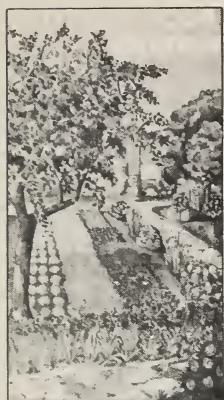


Myers Self-Oiling Traction Sprayer



Myers No. 1087 Traction Sprayer with 125 gallon tank, No. 707 triplex self-oiling pump, with clutch unloading pressure control valve, pressure gauge, gate valves. Myers 4 Row spray boom with 12 nozzles, doubletree and neckyoke complete. Price \$275.00.

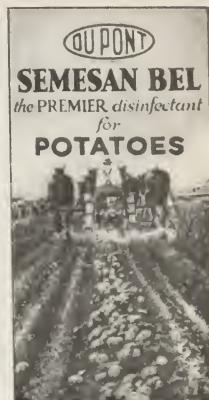
Net Cash Price **\$261.25.**



EMULSO
A Niagara Product
The premier clean up
Oil Emulsion



W.H. CONTROL
Red Mite - Aphid - Scale
Leaf Roller - Pear Psylla



New spray kills both
CHEWING
and SUCKING
INSECTS

Nicotine Pyrox

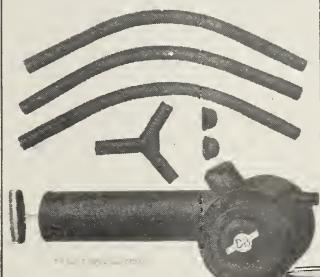


"SAFETY FIRST"



The New Duster

Sturdy Construction—Easy Operation



No. 120 Dandy Duster

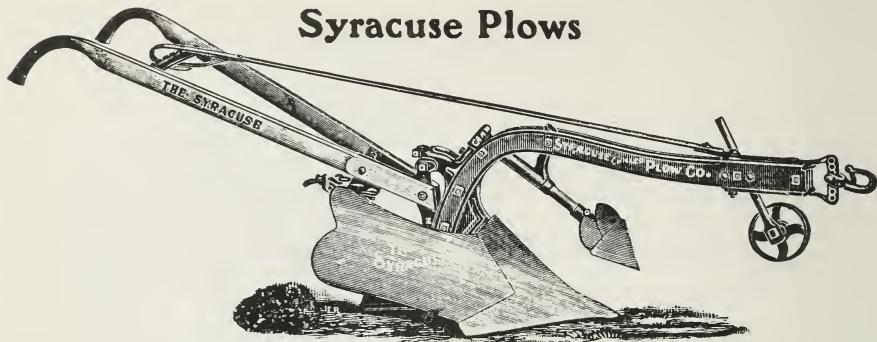
**Fight Bugs
and Blights**



Pyrox



Syracuse Plows

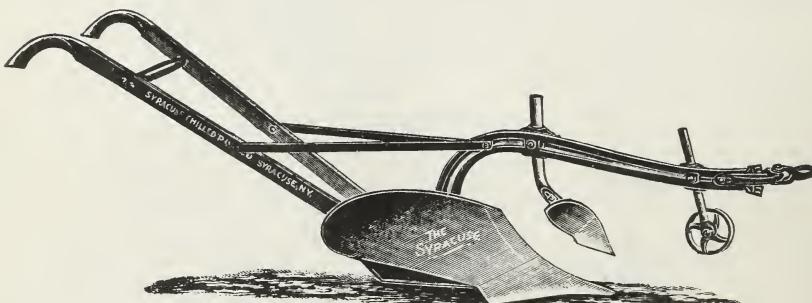


John Deere Syracuse No. 821 Series Truss Steel-Beam Hillside Plows

Ample throat room and close fitting joints prevent clogging. Choice of white iron or tempered steel mouldboards adapts them to a variety of soils. Steel and malleable iron give maximum strength and unusual light weight. Two-piece truss-style beam will not bend or break. Renewable shoe protects standard and serves as landside.

No.	Price	Net Cash Price
825 One horse wheel only.....	\$14.40	\$13.68
824 One horse wheel only.....	15.65	14.87
823 Two horse full trim.....	25.90	24.60
822 Two horse full trim.....	31.40	28.93
821 Two horse full trim.....	32.40	30.80

All above prices are for chilled mouldboards



John Deere Syracuse 31 Series Plows

Furnished with steel clevis, soft center steel mouldboard, solid steel landside cast shoe and chilled share, wheel and jointer as shown.

No.	Price	Net Cash Price
32 Medium 2 horse.....	\$29.65	\$28.17
31 Large 2 horse.....	31.65	30.07

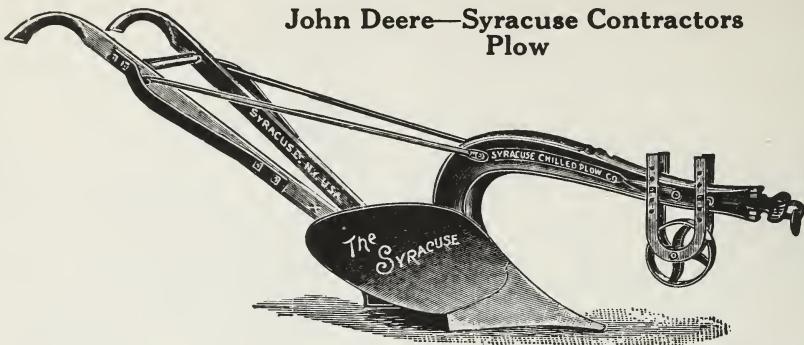


25 acres Broadleaf Tobacco grown on O. & W. Fertilizer
by Anthony Krawski, Wapping, Conn.



32 acres Broadleaf Tobacco grown on O. & W. Fertilizer
by Anthony Zokites, Wapping, Conn.

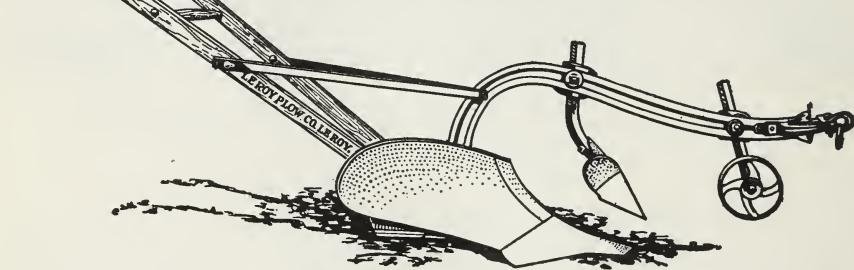
**John Deere—Syracuse Contractors
Plow**



The No. 1 turns furrows 5 to 9 inches deep and 12 to 15 inches wide. Built to stand the strain — extra heavy beam, share and landside, steel wheel frame, loop handle wear irons.

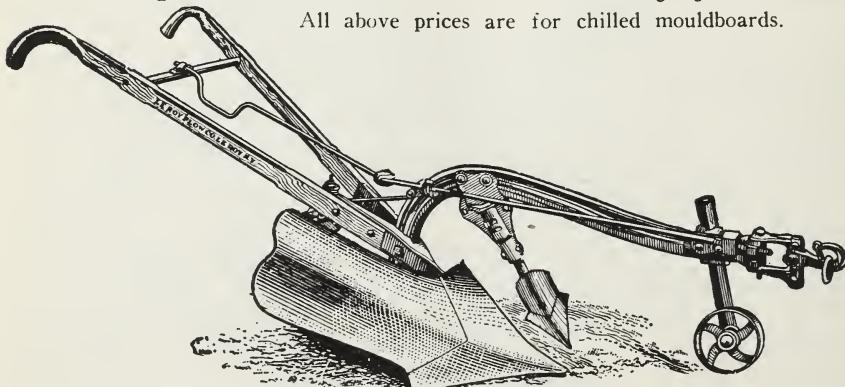
Price \$32.00. Net Cash Price \$30.40.

Leroy Plows



No.	Style	Trim	Price	Net Cash Price
107	1-horse	wheel only	\$18.65	\$17.72
108	Light 2-horse	full trim	25.90	24.61
109	Medium 2-horse	full trim	28.15	26.75
110	Large 2-horse	full trim	30.15	28.65

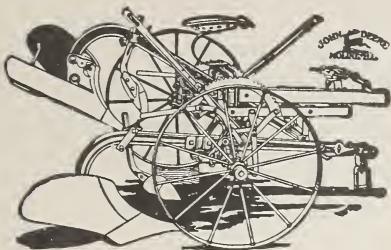
All above prices are for chilled mouldboards.



No. 30 — Capacity, 5 to 8 inches deep, 10 to 14 inches wide. Weight, plain, 110 lbs. Full rigged with jointer and shifting clevis as pictured. Weight, 165 lbs.

Price with Steel Mouldboard \$33.65. Net Cash Price \$31.97.

John Deere Two-Way Plow



Ideal for plowing hillsides or irregular fields. Leaves no dead furrows or back ridges. Patented features make this the easiest plow to control.

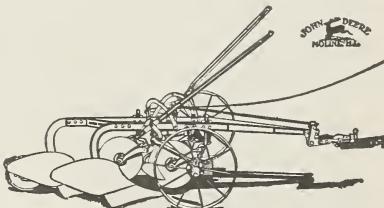
The superiority of Syracuse Plow Bottoms is the result of many years' experience in the successful manufacture of plow parts and constant study of the various soil conditions that require their use.

Style	Capacity	Weight	Price	Net Cash Price
Chilled	12-inch	659 lbs.	\$101.50	\$ 96.43
Chilled	14-inch	677 lbs.	103.50	98.33
C-Comb	12-inch	639 lbs.	103.50	98.33
C-Comb	14-inch	655 lbs.	105.50	100.23
S-Comb	12-inch	639 lbs.	110.00	104.50
S-Comb	14-inch	655 lbs.	112.00	106.40

John Deere No. 40C Tractor Plow

Is built especially for use with small tractors. It has the great draft-reducing combination of rolling landside and self-adjusting hitch. A spring release hitch protects the plow against breakage when an obstruction is hit. Complete with combination Rolling Coulters and Jointers, 24" or 28" cut (steel mouldboards).

Price \$105.00. Net Cash Price \$99.75.



John Deere No. 45C Tractor Plow

This plow is for use behind any standard two plow tractor. It is light, but very strong. Made of special John Deere steel. Hot-riveted construction gives rigidity and long life. A clutch on the axle engages the land wheel, and a pull on the trip rope raises or lowers the plow. Clutch parts are at work only when actually raising or lowering the plow; hence, will last a long time. A spring release hitch protects plow against breakage when an obstruction is hit. Complete with Combination Rolling Coulters and Jointers, 28" cut (steel mouldboards).

Price \$110.00. Net Cash Price \$104.50.

John Deere No. 14 Tractor Plow

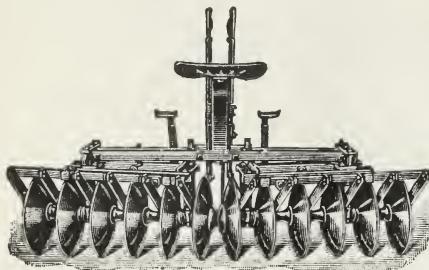
A HEAVY DUTY TRACTOR PLOW



The No. 14 fills a need for a strong single bottom plow for use in the toughest plowing jobs. Equipped with a combination hitch which can be converted from a release hitch to cushion spring hitch by removing release hook and attaching clevis directly to the plunger bolt.

Price—16" bottom \$108.50. Net Cash Price \$103.08.

Disc Harrows



OHIO — 12 - 16 Single Action

The construction of this Harrow is of the very best. It is all steel even the stub pole.

Price with Pole \$45.00. Net Cash Price \$42.75.

Price with Foretruck \$53.00.
Net Cash Price \$50.35.

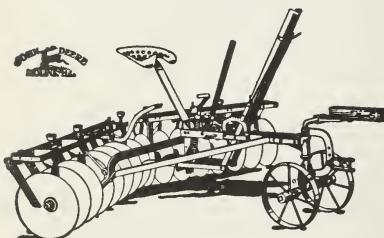
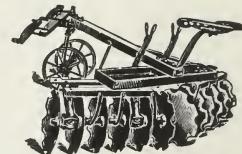
CLARK CUTAWAY Single Action

The Clark "Cutaway" single action harrow is reversible, that is, the gangs can be swung end for end, so that the soil may be thrown either out or in.

Price A-4 1-horse 8-16-inch discs \$43.00.
Net Cash Price \$40.85.

Price A-6 2-horse 12-16-inch discs with pole \$52.00.
Net Cash Price \$49.40.

Price A-6 2-horse 12-16-inch discs with foretruck \$61.00.
Net Cash Price \$57.95.



JOHN DEERE MODEL B

Extremely flexible, penetrates, pulverizes and packs the soil its entire width. Each gang works independently — one gang can pass over obstructions without lifting the other from its work.

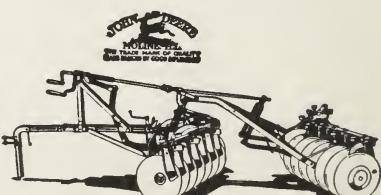
12-16-inch discs with pole \$55.00.
Net Cash Price \$52.25

12-16-inch discs with foretruck \$63.00.
Net Cash Price \$59.85

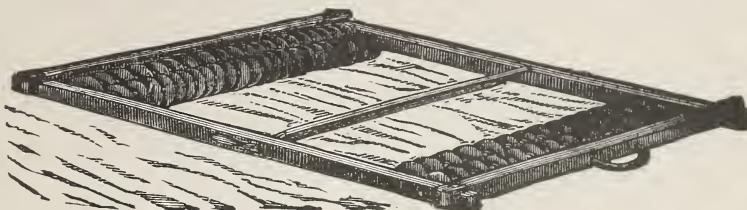
JOHN DEERE MODEL L FOR TRACTOR

Front and rear sections are angled by independent cranks convenient to tractor operator, without backing or stopping harrow. Automatic yielding lock coupling, an exclusive feature, compels rear discs to cut ridges left by front gangs.

	Net Price	Cash Price
24-16 in. discs 6 ft. cut.	\$110.00	\$104.50
28-16 in. discs 7 ft. cut.	120.00	114.00
32-16 in. discs 8 ft. cut.	130.00	123.50



Meeker Smoothing Harrow

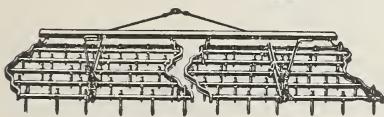


A perfect harrow and land roller combined. This harrow has become a great favorite among all classes of farmers and market gardeners.

It has four (4) sets of rollers containing 58 steel discs. These discs grind all lumps and save the work of raking and also mash small stones below the surface better than any field roller, leaving the land smooth and level.

Size 6 ft. 8 in. x 6 ft.—10 in. discs. Price \$40.00. Net Cash Price \$38.00.

John Deere Universal Steel Lever Harrow



The Universal is the ideal spike-tooth harrow for orchard or vineyard work because the end rails prevent the tooth bars from catching on trees or vines. A spring relief on each lever permits the harrow teeth to pass over roots, stones, or other obstructions without being damaged.

We can furnish the Universal in one, two, three, and four sections, with either 25 or 30 teeth to the section.

Price 2 section 60 tooth \$24.00.

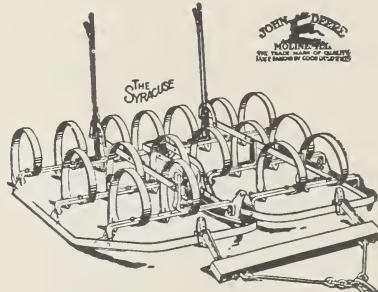
Net Cash Price \$22.80.

Syracuse Spring Tooth Harrow

Its special-process, *heat-treated* spring-steel teeth penetrate to a greater depth than any other type of harrow teeth. They tear out the weeds and leave the field smooth. The teeth are securely *clipped* to the tooth-bars — no bolt holes to weaken them.

There are no delays due to clogging when you use one of these harrows — frame is designed so that weeds and trash work out through openings between the sections.

We can furnish any number of sections you desire; also tractor hitch if you want it. Price 2 section 17 tooth \$27.00. Net Cash Price \$25.65.



Acme Pulverizing Harrows

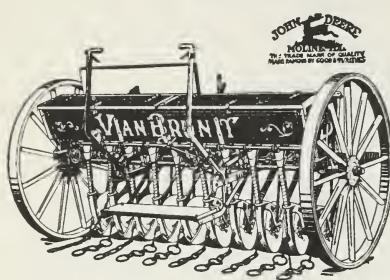


No. 8—4 ft. 4 in. cut for 1 horse.
Price \$21.50. Net Cash Price \$19.42.

No. 12—6 ft. 6 in. cut for 2 horses.
Price \$24.00. Net Cash Price \$22.80.

No. 12F—6 ft. 6 in. cut for 2 horses.
Price \$28.00. Net Cash Price \$26.60

John Deere-Van Brunt Disc Fertilizer Drill With Grass Seed Attachment



adjustable Gate Force-Feed is one of the best seeding devices made. Drill handles fertilizer in quantities from 65 to 1250 pounds per acre. Plants wheat, oats, barley, flax, rye, rice, alfalfa, peas, beans, corn, etc.

Size 11 x 7 furnished regularly with 1 pole and 2-horse evener.

Price complete with grass seed attachment \$175.00.

Net Cash Price \$166.25.

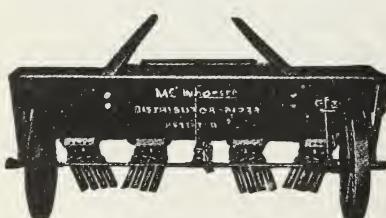
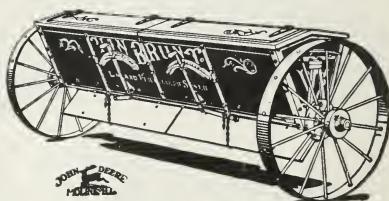
John Deere-Van Brunt Lime and Fertilizer Sower

Covers 8 feet of ground; carrying capacity 10 bu. Direct wheel drive — each wheel drives half the machine.

One of the best features of this sower is the simple feed control which enables you to distribute crushed lime rock, commercial fertilizers, and other materials in quantities from 150 to 8,000 pounds per acre. Half of the mechanism can be disengaged for sowing narrow strips.

Price \$83.00.

Net Cash Price \$78.85.



McWhorter Fertilizer Sowers

No. 34 shown in the cut is a low-down type machine, which is intended for use with one horse. It can be used for broadcast or between the row sowing.

Price \$68.00.

Net Cash Price \$60.60.

No. 26 is a two-horse machine, equipped with six sets of spouts, with a hopper capacity of 540 lbs., the extreme width is 9 ft.

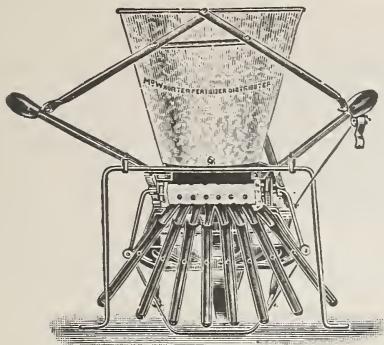
Price \$93.50.

Net Cash Price \$88.83.

Nonpareil Broadcast Fertilizer Sowers

Specifications

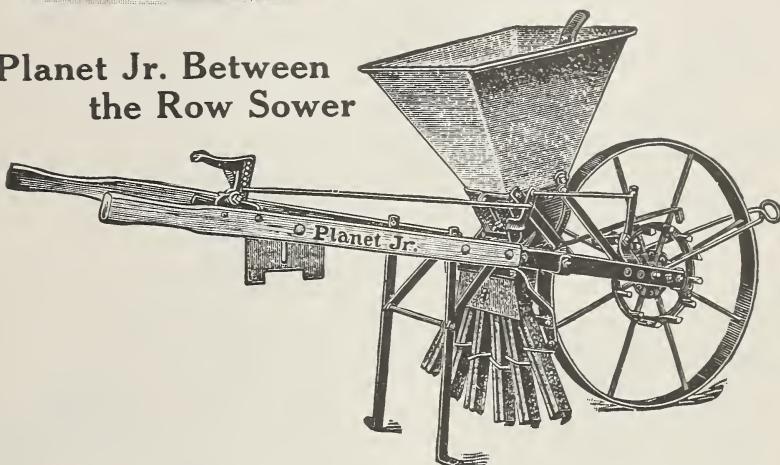
	Price	Net Cash Price
8 ft. Special, Capacity	15 bu.	\$65.00
5 ft. 3 in., Orchard, Capacity	10 bu.	60.00
		\$61.75
		57.00



No. 21 McWhorter Wheelbarrow Sower

This machine has the same positive belt feed as used on the larger McWhorter Sowers. Sows any quantity from a few pounds up to forty to the hundred yards of row, or from 200 lbs. to a ton per acre. Price \$21.00. Net Cash Price \$19.95.

Planet Jr. Between the Row Sower



Planet Jr. No. 220 Fertilizer Distributor will distribute fertilizer in the middles of three rows 12 to 14 inches apart; it will side-dress one side each of two rows up to 36 inches apart (one complete row; and corn in wider rows). You can use it in very narrow rows — as close as 9 inches.

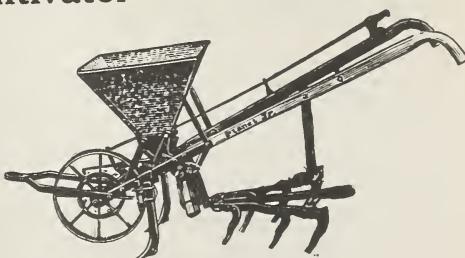
Price \$27.00. Net Cash Price \$25.65.

Nos 230 and 230-A Fertilizer Distributor and Cultivator

These machines are great time and labor savers.

The one machine does three operations at once. It opens the furrow next to the row, puts fertilizer in it and then stirs it thoroughly into the soil.

This results in an absolute economy of fertilizer as none is lost through blowing away or leaching.



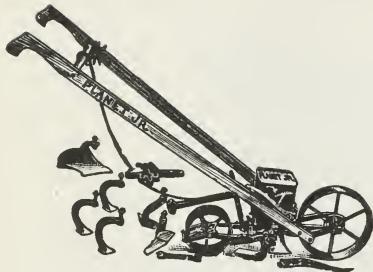
This new and improved method of applying a wide strip of fertilizer between the rows and thoroughly mixing with soil in one operation has the advantage of making the fertilizer available sooner, prevents loss and saves all the time usually consumed by a cultivation to work the fertilizer in.

The two-wheel machine, No. 230-A is recommended for flat land work and the one-wheel for irrigated sections.

No. 230 Price \$35.00. Net Cash Price \$33.25.
No. 230A Price \$37.50. Net Cash Price \$35.63.

Planet Jr.

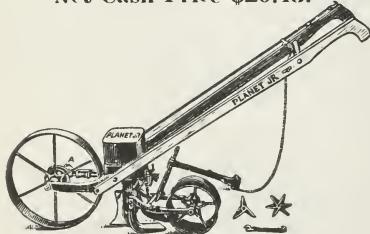
Seeders



No. 25 Planet Jr. Combined Hill and Drill Seeder, Double and Single Wheel Hoe, Cultivator and Plow. Has long been known as the "Complete Gardener".

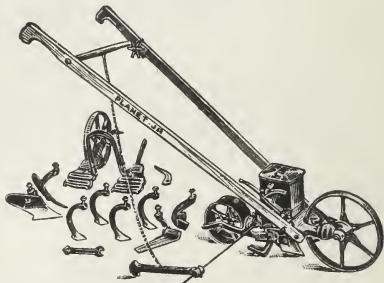
Price \$21.50.

Net Cash Price \$20.43.



No. 4 Planet Jr. Combined Hill and Drill Seeder, Single Wheel Hoe, Cultivator and Plow. Very popular with owners of small gardens. Price \$18.00. Net Cash Price \$17.10.

No. 4D (seeder only). Price \$14.25. Net Cash Price \$13.54.



No. 3 Planet Jr. Hill and Drill Seeder. For Market Gardeners, Onion Raisers and other large growers. Holds 3 qts.

Price \$17.50.

Net Cash Price \$16.63.

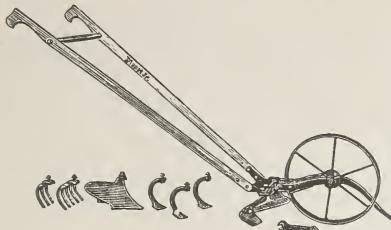
No. 300-A Planet Jr. Drill Seeder. There has always been a demand for a quality seeder which will sow through holes in a plate rather than through a variable diamond-shaped opening.

In response to this demand we present the No. 300-A Drill Seeder. It is designed primarily for use on light muck soil but so sturdily is it built that it is equally satisfactory on heavy loam or clay soils. Capacity 4 qts.

Price \$20.00. Net Cash Price \$19.00.



Planet Jr. Single Wheel Hoes



No. 16. Equipment (as shown): One pair of 6" hoes, three cultivator teeth, one garden plow, one 7" rake, one 4" rake, one leaf guard.

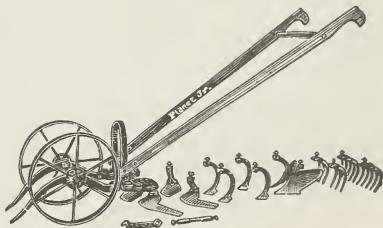
Price \$9.00. Net Cash Price \$8.55.

No. 17 Equipment—one pair 6 in. hoes, three cultivator teeth, one plow. Price \$7.75. Net Cash Price \$7.37.

No. 17 1/2 Equipment—one pair 6 in. hoes, three cultivator teeth. Price \$6.75. Net Cash Price \$6.43.

No. 18 Equipment—one pair 6 in. hoes. Price \$5.75. Net Cash Price \$5.47.

Planet Jr. Double and Single Wheel Hoes Combined



No. 11. Equipment (as shown): One pair 6" hoes, one pair 4 1/2" hoes, four steel cultivator teeth, one pair plows, two three tooth rakes, two five tooth rakes, two leaf lifters.

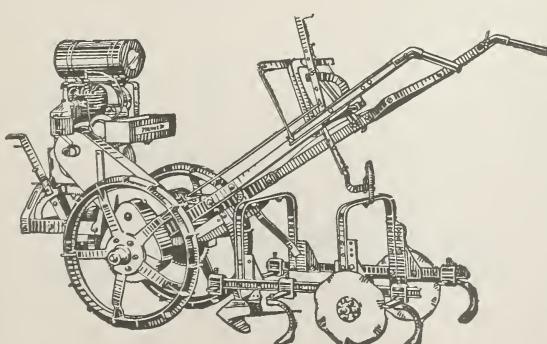
Price \$13.75. Net Cash Price \$13.07.

No. 12 Equipment—one pair 6 in. hoes, four cultivator teeth, one pair plows. Price \$10.75. Net Cash Price \$10.22.

No. 13 Equipment—one pair 6 in. hoes. Price \$8.00. Net Cash Price \$7.60.

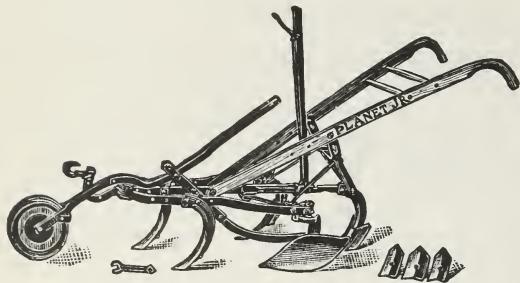
Planet Jr. Motor Cultivator

The Planet Jr. Motor Cultivator is built to do a wider range of work, to do more work with less effort on the part of the operator, to do faster, closer cultivation and to afford greater economy.



The primary purpose of such a tractor is cultivation of narrow row crops such as beets, carrots, onions, etc. Many farmers and home owners with extensive gardens, however, wish to do a wider range of work from light plowing to horse cultivation in wide rows. The Planet Jr. has been made heavy enough and powerful enough to do this work in a very efficient manner. It handles a six-inch plow easily.

Net Cash Price delivered \$299.25.



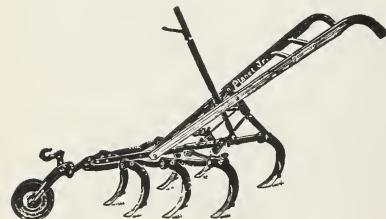
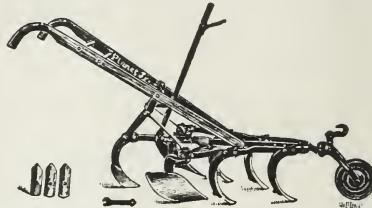
No. 8 Planet Jr. Horse Hoe and Cultivator. Equipment (as shown): Four 3 x 8 in. cultivator steels, one 4 x 8 in. cultivator steel, two 6 in. hillers, one 7 in. shovel, lever wheel, lever expander and depth regulator. Price \$16.25. Net Cash Price \$15.44.

No. 7 Planet Jr. Horse Hoe — Same as No. 8 but has no depth regulator. Price \$15.75. Net Cash Price \$14.97.

No. 9 Planet Jr. Horse Hoe — Identical with No. 8 except that it has a plain wheel instead of a lever wheel; and is without depth regulator.

Price \$14.25. Net Cash Price \$13.54.

No. 82 Planet Jr. Horse Hoe and Cultivator Combined. Equipment (as shown): Seven 2 1/4 x 8 in. cultivator steels, one pair 6 in. hillers, one 7 in. shovel steel, lever expander. Can be equipped with lever wheel. Price \$15.75. Net Cash Price \$14.97.



No. 90 Planet Jr. Twelve-Tooth Harrow, Cultivator and Pulverizer (as shown).

The teeth are 1 1/4 inches wide and wear well, being specially hardened. By using the lower hole, the teeth may be set to slant backwards for breaking the crust before the weeds begin to grow. Price \$17.00.

Net Cash Price \$16.15.

No. 90B. Less Pulverizer.

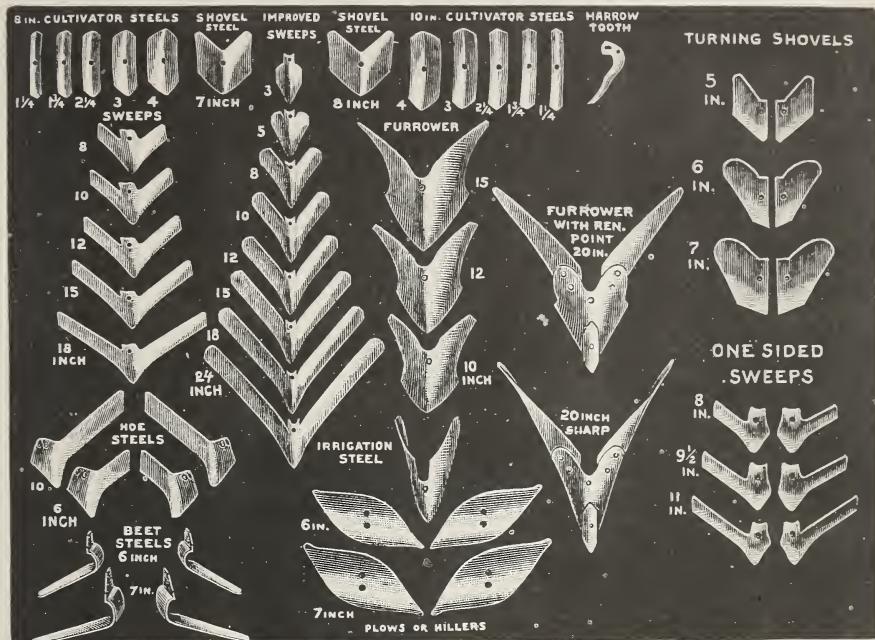
Price \$14.00.

Net Cash Price \$13.30.

No. 83 Planet Jr. Seven Tooth Plain Cultivator. Equipment (as shown): Seven 2 1/4 x 8 in. cultivator steels, lever expander. Is the most profitable one-horse cultivator to use. The seven teeth make possible finer cultivation than can be had with a five-tooth cultivator. Can be equipped with lever wheel.

Price \$14.25. Net Cash Price \$13.54.



“PLANET JR.”**Varieties of Steel Plates made for the “Planet Jr.” Horse Hoe.**

The $1\frac{1}{4}$ inch steels throw almost no furrow, and run very deep, yet work beautifully as cultivating teeth and subsoilers, very desirable where the soil is to be broken up thoroughly without hillng, as where the ground is clean, but beaten down by rains, or baked by the sun. The next two sizes, $1\frac{3}{4}$ and $2\frac{1}{4}$ inch, are desirable for general cultivation, and do superior work in hard lands. The next is 3 inch; this is the size, with one 4 inch for the rear standard, which is sent out with the Horse Hoe, unless otherwise ordered, being best adapted to general work in all kinds of soil.

$1\frac{1}{4}$ x 8 inch Steels,	\$0 .17	12 inch Improved Sweeps,	\$0 .80
$1\frac{3}{4}$ " " . . . . .	.18	15 " " " . .	.95
$2\frac{1}{4}$ " " . . . . .	.20	18 " " " . .	1.25
3 " " . . . . .	.22	24 " " " . .	2.75
4 " " . . . . .	.27	6 inch Hillers, . . . . .	.65
7 " " Shovel Steel, . . . . .	.35	7 " " " . .	.80
8 " " . . . . .	.40	6 inch Hoe Steels, . . . . .	.65
Bolts, 5¢ each, 50¢ doz.		10 " " " . .	.75
8 inch Sweep (regular) . . . . .	.43	10 " Furrower,	1.00
10 " " . . . . .	.46	12 " " " . .	1.35
12 " " . . . . .	.52	15 " " " . .	1.75
15 " " . . . . .	.70	20 " Furrower, old style,	
18 " " . . . . .	.85	with wings	3.25
24 " "	2.00	20 " Furrower, new style,	
8 inch Improved Sweeps, . . . . .	.55	with wings	3.25
10 " " . . . . .	.65	Pulverizer for Harrow Special,	3.75

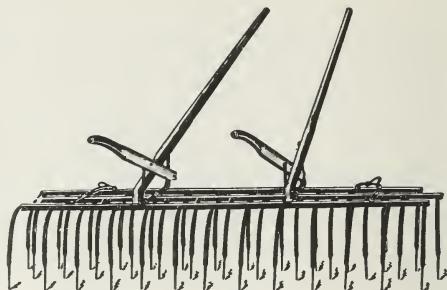
Improved Sweeps do not fit Horse Hoe Side Standards.

Hallock Pattern Weeder

A Standard Weeder having curved teeth.

Price \$16.00.

Net Cash Price \$15.20.



Planet Jr. Pivot Wheel Cultivators

The No. 72 as shown has five levers, and they simplify its control so that a boy can operate it with success. The center lever adjusts the hinged tongue regulating the depth of the front teeth and leveling up the machine to suit all heights of neck yoke. The outside levers regulate the depth of the teeth in the rear, while intermediate levers are used in changing the widths of the gangs to suit irregular planting without stopping the team.

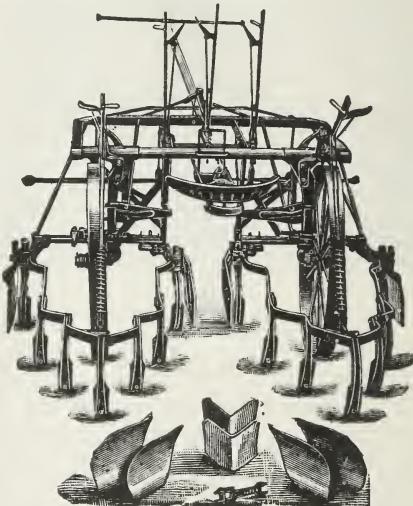
Price \$100.00.

Net Cash Price \$95.00.

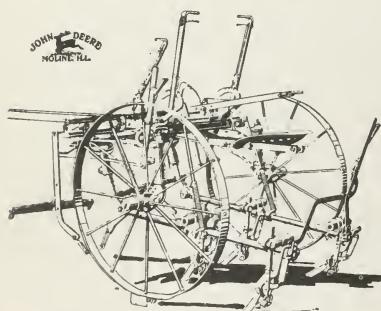
The No. 76D Single row works rows 28 to 48 inches apart. The gang frames are extra heavy, but improved levers with lifting and depth regulating springs make for easy, perfect control.

Price \$70.00.

Net Cash Price \$66.50.



JOHN DEERE KL CULTIVATOR



The K. L. is a new cultivator especially adapted for good work in crops planted in either narrow or wide rows.

It cultivates rows as narrow as 30 inches and as wide as 48 inches.

Wheel track adjustable to 34, 36, 38, 40, 42, 44 and 46 inches.

Price 8 shovel pin break \$67.00.

Net Cash Price \$63.65.

Price 8 shovel spring trip \$72.00.

Net Cash Price \$68.40.

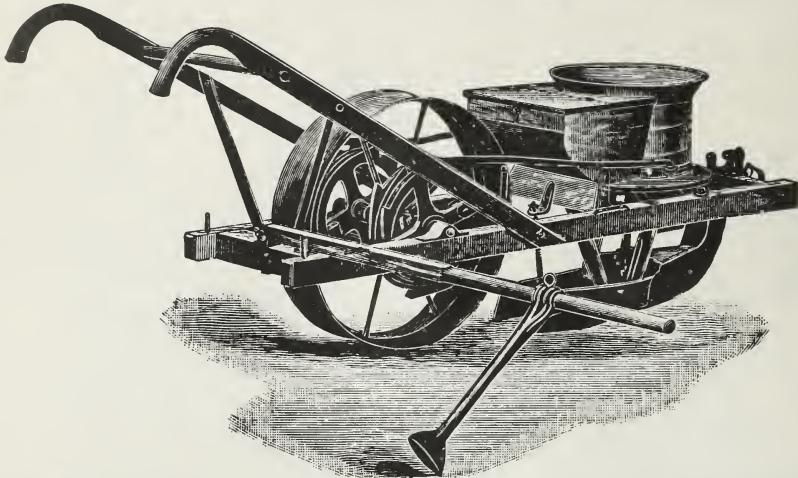


Broadleaf grown on O. & W. Blue Label Tobacco Fertilizer
by H. P. Brewer, Hillstown, Conn.



12 acres Broadleaf grown on O. & W. Blue Label Tobacco Fertilizer
by Joel and Harry Brewer, Hillstown, Conn.

"KING OF THE CORNFIELD"

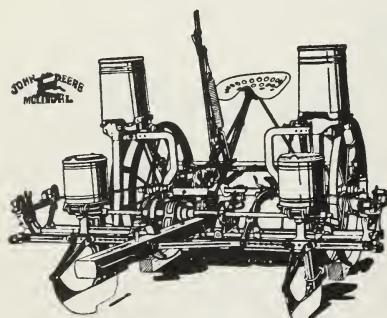


Corn, Bean and Pea Planter and Fertilizer Distributor

Every machine is warranted to be well made of good material, and guaranteed to do its work perfectly and satisfactorily with the different kinds of seeds, as we claim, if used according to directions.

Price \$43.00. Net Cash Price \$40.85.

JOHN DEERE No. 999 CORN PLANTER



Widely recognized as the most accurate planter on the market. The John Deere Natural Cell-Fill, Edge-delivery seed plates, sloping hopper bottom, improved metal cut-off and knocker insure positive feed and unfailing accuracy. Plants accurately whether the hopper is full or nearly empty. Seed plates for handling every kind of corn; also beans, and many other seeds. Variable drop plants two, three or four kernels in each hill as desired. The number of kernels per hill can be varied merely by shifting foot lever, without stopping the machine. Also varies the distance in drilling. Easy to

change from hilling to drilling. Underhung reel; a touch of the toe releases check wire, fertilizer can be checked with each hill or drilled along the row.

Price complete with fertilizer attachment and check rower \$115.00.

Net Cash Price \$109.25.

Price plain \$75.00. Net Cash Price \$71.25.

POTATO PLANTERS



Hoover Visible With Automatic Seed Control. With the operator on the seat at the rear the whole planting operation is before him. This enables him to make certain that each picker is working properly, thus assuring perfect planting.

The Safety Fertilizer Attachment is equally efficient. You can regulate amount of distribution from 75 lbs. to 3,400 lbs. of fertilizer per acre.

We can furnish the John Deere-Hoover Planter with fertilizer distributor in both 1 and 2-row sizes.

Price as shown \$145.00.

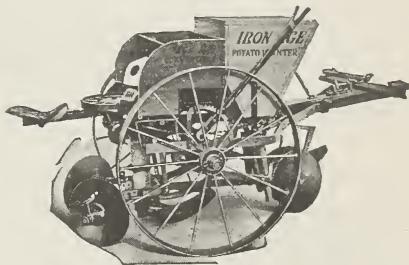
Net Cash Price \$137.75.

IRON AGE—Two Man, Assisted Feed

For many years it has been conceded that in its ground performance the Iron Age Planter exhibits the highest degree of perfection ever attained. By Iron Age ground performance is meant the opening of furrow, distributing of fertilizer, placing of the seed safely out of touch of the fertilizer and finally ideal covering and ridging. Equipped for large seed.

Price as shown \$145.00.

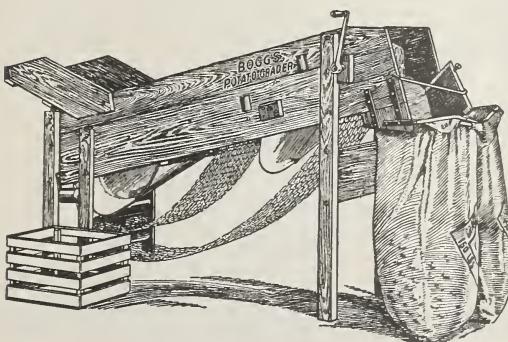
Net Cash Price \$137.75.



HOOVER POTATO CUTTER

This cutter meets the general demand for a first-class potato cutter. Provision is made to cut either large or small potatoes into the proper number of pieces.

Price \$20.00. Net Cash Price \$19.00.



BOOGS STANDARD HAND POTATO GRADER

Boogs No. 3 machine permits long or round potatoes to be sorted and graded into No. 1 and No. 2 sizes with less than 3% variation in size from government grades, and cleans them of all dirt, trash and culls in one operation. No. 3 hand grader as illustrated has a capacity of 150 bushels per hour.

Price \$68.50.

Net Cash Price \$65.08.

When large quantities of potatoes are to be graded, the power equipments will be found most advantageous. They not only have much greater capacity than the hand machine, but effect a big labor saving. Prices on application.

**Farquhar Success Jr.
Potato Digger**

The most popular plow-type digger on the market. Just the digger for the small grower — in fact no farmer can afford to be without this digger even if he raises only sufficient potatoes for his own consumption. In time and labor saving it pays for itself the first season.

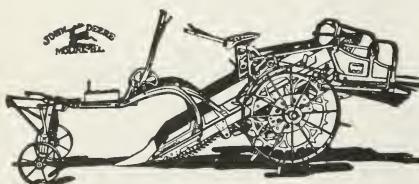
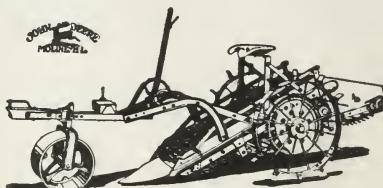
Price \$16.00.
Net Cash Price \$15.20.



The "Hoover" Potato Diggers are made with rod type elevator, 6 and 7 foot frame, in 20, 22 or 24 inch widths, with chain, gear or engine drive, with agitating vine separating rear rack or extension elevator. All diggers can be furnished with either the Two-wheel (Double Action) or Single Roller Front Truck at same price. The 6 foot digger has 30 inch and the 7 foot 36 inch drive wheels with an extreme tread of 41 inches on the 22 inch chain drive and 39 inches on the 22 inch gear drive diggers and are practically of all steel construction.

No. 1522K gear driven with 5½ ft. 22 in. rod elevator and 3 ft. extension elevator built for the farmer with a small acreage.

Price \$120.00.
Net Cash Price \$114.00



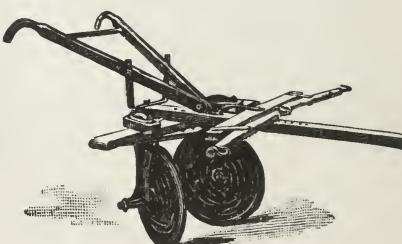
No. 622-N chain driven with 6 ft. 22 in. rod elevator and vine separating rear rack.

Price \$145.00.
Net Cash Price \$137.75.

No. 10 Disc Hiller

The most practical and efficient implement of the disc type, has 20" discs. Especially good for hilling potatoes.

Price \$18.00.
Net Cash Price \$17.10.



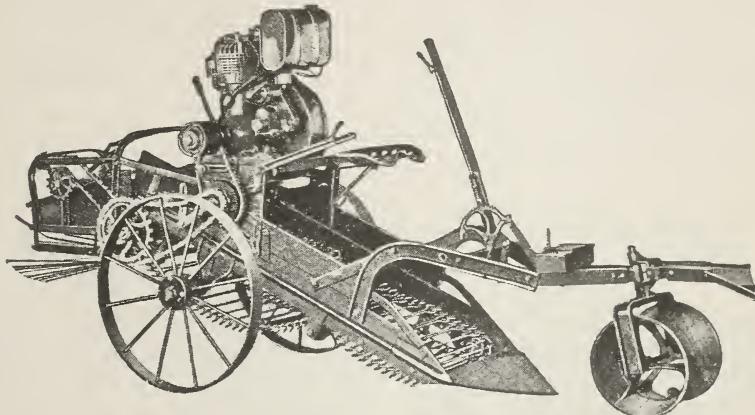
Engine Drive Diggers

The engine drive potato digger is the adaptation of the modern light-weight gasoline engine to the driving of the mechanism of the elevator potato digger.

The engine is mounted on the main frame of the potato digger and transmits the power to the main elevator shaft.

From the driver's seat, the operator controls the friction clutch lever, also the speed of the engine for varying conditions of digging.

The clutch sprocket automatically releases if stone or other hard substance should become clogged in the digger. This eliminates all possibility of damage to the engine or digger.



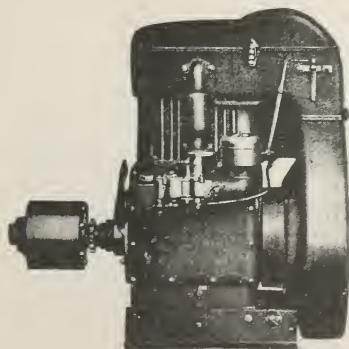
Hoover No. 4724-N chain driven 7 ft. with 24 in. rod elevator, vine separating rear rack, and 5 Horse Power New Way Engine as shown.

Price \$375.00. Net Cash Price \$356.25.

Iron Age No. 220 — 7 ft. with 22 in. rod elevator, vine separator, and 5 Horse Power New Way Engine.

Price \$350.00. Net Cash Price \$332.50.

A New "New Way" Twin Air Cooled Engine



The most powerful industrial engine of its weight made. 6 to 8 H. P. Speed 400 to 1800 R.P.M. Outfit E3—as shown has 6 x 4 1/2" F. C. Pulley. Price \$245.00.

Net Cash Price \$232.75.

New Way single cylinder 5 H. P. shown on potato digger. Has 6 x 4 1/2" F. C. Pulley. Price \$185.00.

Net Cash Price \$175.75

John Deere High Lift Mower

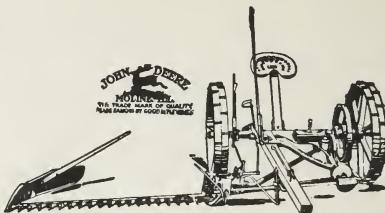
One Horse, Price \$80.00.

Net Cash Price \$76.00.

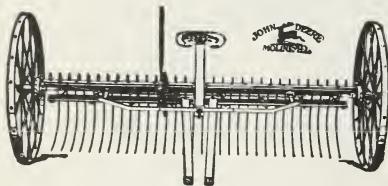
Two Horse, Price \$85.00.

Net Cash Price \$80.75.

An extremely simple mower with a high, easy lift. Bar raised with foot lift amply high to pass over ordinary obstructions, with hand lift bar raised extremely high. A boy can operate it. Special arrangement of simple driving gears prevents side strain and undue wear on bearings. Maximum power delivered to carefully-made and accurately-fitted knife. Location of pinion on crank shaft prevents end thrust. Bar attached to wide yoke insures instant starting. Cutter bar floats and has great flexibility. All adjustments and repairs quickly and easily made with ordinary tools.



New John Deere — Steel Sulky Rake



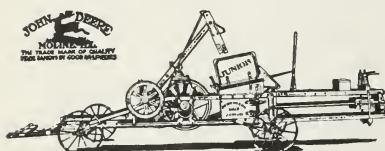
The rake that gives years of service. Wheels interchangeable, and dump rods reversible, giving extra wear without repair expense. There is no hay too heavy or too light for the John Deere Sulky Rake. It will do the kind of work desired under all conditions.

Self-Dump — 8, 9, 10 and 12 foot.

Price 8 ft. with end guard teeth \$46.00.

Net Cash Price \$43.70.

John Deere-Dain Junior Motor Hay Press



A Light Weight Outfit Built for Individual Use.

Baled hay brings the highest market price. Hay that is baled is more easily handled, and requires less storage space.

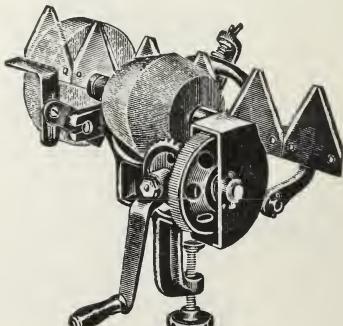
This press will bale successfully hay, alfalfa, straw, etc.

Price on application.

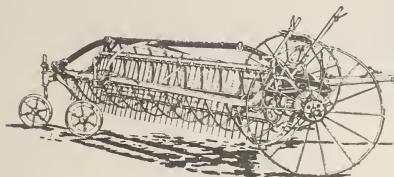
Modern Grinder

For mower knives and general tool grinding fast cutter and easy to operate.

Net Cash Price \$6.50.



John Deere-Dain Combination Rake



For the man who desires a combination rake, this machine will do satisfactory work. Moving one lever changes machine from rake to tedder. Angle of teeth easily changed, and either end of reel raised or lowered independently. Has ample clearance for heavy hay or large windrows. Left-hand wheel can be set in for turning windrows

Price \$130.00.

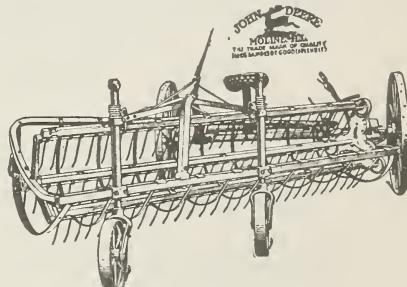
Net Cash Price \$123.50.

John Deere-Dain System Rake For Air-Curing Hay

This rake aids the hay-grower in producing hay that brings the highest market price. Air cures hay without loss of color, foliage or feeding value when used according to the John Deere-Dain System of Air-Curing Hay. Rake follows mower while leaves are still active and lays the hay in loose, fluffy windrows, leaves inside, butts out. The foliage thus protected cures properly, does not get brittle and break off. Inclined frame gives greater capacity as volume of hay increases. Curved teeth lift hay gently — no dragging or threshing. All adjustments are made from the seat.

Price \$125.00.

Net Cash Price \$118.75.



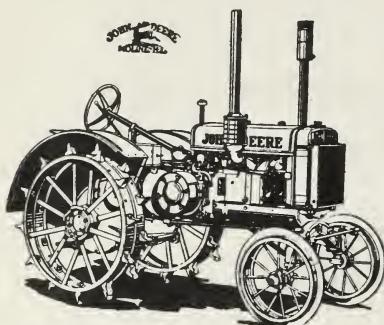
John Deere Single-Cylinder Windrow Hay Loader



Very light draft and minimum number of working parts. Single drum mounted directly on the axle. Hinged carrier makes loading easy in windy weather. Furnished regularly with forecarriage — no lifting is necessary when coupling to wagon. Extra strong, well braced frame with hot-riveted corner plates. Gets all the hay when properly raked into windrows. Handles alfalfa and clover without knocking off valuable foliage parts. Capacity ample for all side-rake windrows. Made in 6 foot width with forecarriage.

Price \$130.00.

Net Cash Price \$123.50.



No. 105 Model "GP" Standard Tread 2 Plow John Deere Tractor

Simplicity and Economy

—Features That Mean a Lot in the Tractor You Buy

Simplicity and economy are not new words, but they're mighty important features to be considered if you are buying a new tractor.

THE JOHN DEERE TRACTOR IS ACTUALLY HUNDREDS OF PARTS SIMPLER THAN OTHER TRACTORS OF SIMILAR RATING.

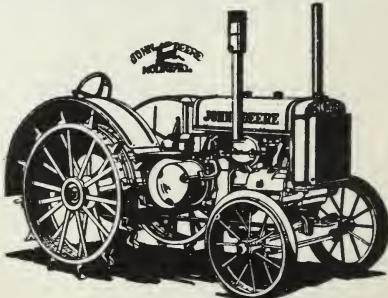
This means that when you own a John Deere you have a tractor that is much easier to understand and easier to operate. It means that you have a tractor that will last longer. The fact that the John Deere is made up of fewer parts has made it possible to build those parts *sturdier* and more wear-resisting and still keep the total weight down.

There are fewer moving parts to cause loss of power, fewer points of contact and wear, fewer possible sources of friction.

This John Deere simplicity saves you money both on repairs and in fuel costs. The heavy-duty, two-cylinder John Deere motor is designed to get maximum power, efficiency and economy from low-cost fuel.

It is only natural that this remarkable tractor is giving its owners more years of service at lower costs.

Prices on application.



No. 108 Model "D" 3 Plow
John Deere Tractor

COME IN AND SEE THE JOHN DEERE AND GET FULL DETAILS.
YOU'LL ALWAYS FIND US GLAD TO TALK "TRACTOR".

Buying Needed Implements Is Real Thrift



AND IT ALWAYS PAYS TO GET THE BEST TO FIT YOUR NEEDS



Doing without needed implements is like doing without needed food—it never pays.

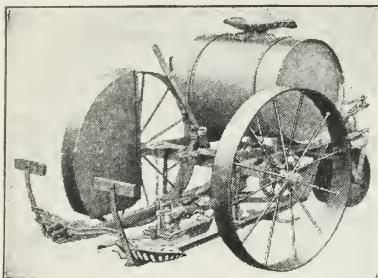
You are going to keep on farming. You will want to carry on the work as economically as possible; save maximum time and labor, produce more per acre, cut the cost of production per bushel, per ton and per acre.

Good implements will enable you to do that. Give them serious consideration now.

Come to our store and look over our implements and machines. Take plenty of time to consider them carefully. Measure their qualities against your needs. See them in their true light; as good, profitable investments; as the means by which you can make more profit from your future farming.

Come in any time and see our stock.

New Improved Tiger Transplanter



The lifting lever works on an eccentric. A child can lift the weight of two men and when the lever is operated it automatically throws machine out of gear.

Simply and strongly made with these new improvements this machine is rapidly coming into favor with discriminating buyers. This machine has $1\frac{1}{4}$ inch water connections. The flow of water is under perfect control and can be regulated to deposit as small a quantity as desired, or to discharge one pint to each plant.

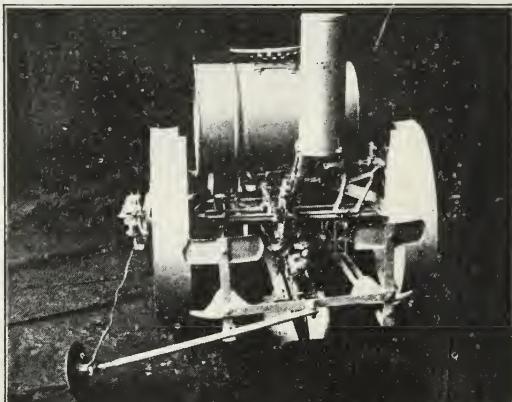
Price \$105.00.
Net Cash Price \$99.75

Bemis Transplanter

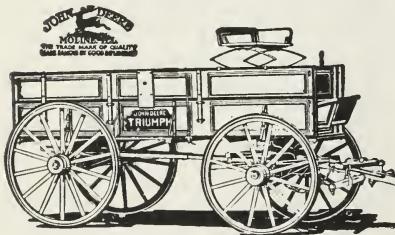
Thirty-five years of practical experience is embodied in the Bemis.

Nearly every tobacco farm in the Conn. Valley is equipped with one or more of these implements.

Price \$105.00.
Net Cash Price \$99.75.



John Deere Triumph Wagon



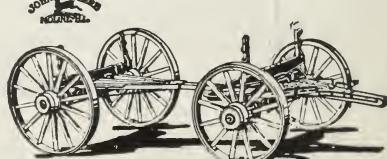
An attractive light-running wagon of moderate price having many of the features to be found on the more expensive John Deere wagons, among them the sand-and dust-proof skeins and malleable fifth-wheel bolster plate with corrugated coupling. Clipped gears; square wood front hounds of straight-grained oak; wheels are built strong of high grade material; hubs are oak or No. 1 black birch; oak or hickory spokes; box is firmly braced and strengthened with cross cleats and straps.

Prices on application.

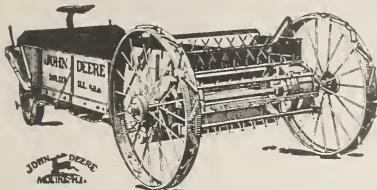
John Deere Farm Truck

In price, strength, draft and finish, John Deere farm trucks give exceptional satisfaction. They stand hard usage year after year because they are built right and in a factory that has an established reputation for making only the best.

Price \$70.00.
Net Cash Price \$66.50.



The Old Reliable John Deere Manure Spreader



In 1911 came the greatest change ever made in spreader design — the invention of the John Deere Spreader — the spreader with the beater on the axle; a machine that combined a low easy loading box with high drive wheels. This still is the preferred spreader on thousands of farms.

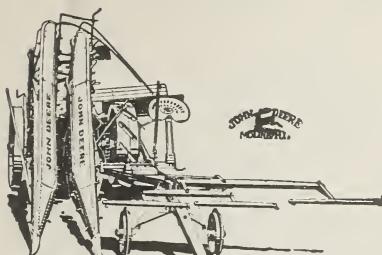
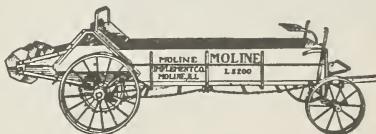
Size	Capacity	Price	Net Cash Price
A	30 Bushel	\$177.50	\$168.63
B	40 "	180.00	171.00
C	50 "	190.00	180.50

Moline No. 200 Manure Spreader

A new sturdy, but light weight spreader simple in design.

50 Bushel size with 2 Horse Hitch.

Price \$175.00.
Net Cash Price \$166.25.



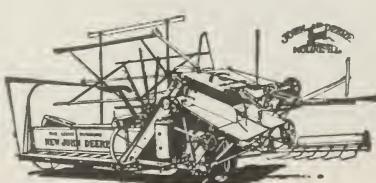
John Deere Corn Binder

This binder is unusually easy to operate. By merely pressing foot-trip lever, power carrier delivers bundles free of horses' path and practically at right angles to standing corn. All steel quick turn Tongue Truck takes neck weight from horses and also makes it easy turning. Stiff pole and tractor hitches can be furnished.

Price on application.

John Deere Grain Binder

Main frame is extra strong. Bars are widely overlapped and hot-riveted together. Into forged-in-frame bearing supports are fitted self-aligning bearings which cannot get out of line.



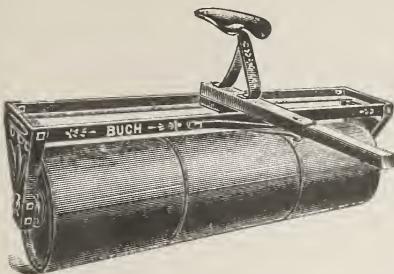
Price on application.



15 acres Broad leaf Tobacco grown on O. & W. Blue Label Fertilizer
by Frank Roberts, Silver Lane, Conn.



Broadleaf Tobacco grown on O. & W. Blue Label Fertilizer
by Edward J. Wells, Warehouse Point, Conn.

**STEEL LAND ROLLER**

The drums are heavy steel sheets not easily dented. The ends are closed to keep out dirt and trash. The frames are heavy angle steel securely bolted.

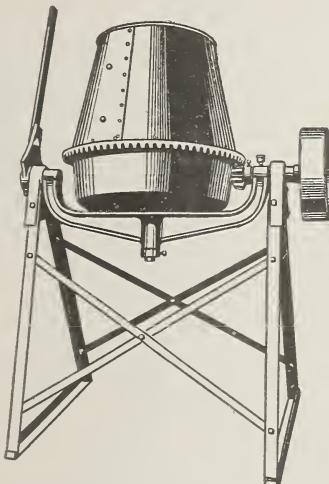
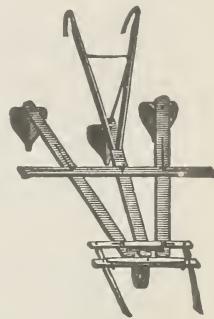
Price \$50.00. Net Cash Price \$47.50.

GOSLEE IMPROVED FIELD MARKER

(Spread 2 to 4 feet)

This machine is designed to mark out rows any width for any crops grown in rows. Teeth are adjustable to any size and depth drill.

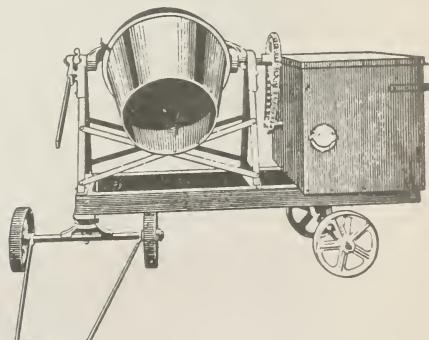
Price \$19.00. Net Cash Price \$18.05.

**THE JUMBO CONCRETE MIXER**

Capacity from 27 to 45 cubic yards of well mixed concrete a day. Have you ever figured out just how much time and money a good concrete mixer would save you?

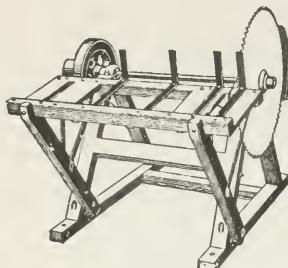
A Jumbo, for example, with a squad of four men will do the work of 8 to 10 at hand mixing, which means a saving of at least \$15 a day — and a better mix can be obtained. Can be operated by hand or engine.

Price \$28.00. Net Cash Price \$26.60.

**THE JUMBO CONCRETE MIXER Mounted
on Truck With Jumbo 1 3/4 H. P. Engine**

Several advanced and practical features of internal combustion engine design are embodied in the Jumbo construction. For example, the magneto is attached to the cylinder head directly over the intake valve, which insures positive ignition, and longer life to the igniter insulation, and complete utilization of the fuel.

Price \$110.00. Net Cash Price \$104.50.



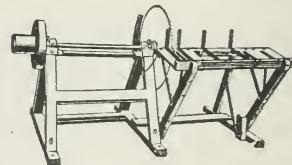
Jumbo Saw Frames

No. 700 With Tilting Table. Built especially for sawing cord wood. Mandrel of finest cold rolled steel $1\frac{1}{16}$ " dia., 49" long — fitted for saw with $1\frac{3}{8}$ " hole. Flywheel is accurately machined and carefully balanced, $15\frac{1}{2}$ " dia., weight 65 lbs. Standard pulley size 6 x 6".

Price \$25.00. Net Cash Price \$23.75.

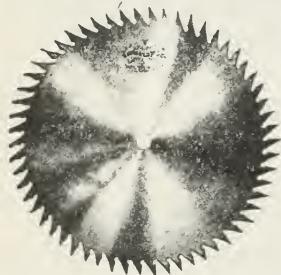
No. 701 With Pole Extension — One of the best frames obtainable for sawing long poles and heaviest cord wood.

Price \$28.00. Net Cash Price \$26.60.



Curtis Guarantee Cord-Wood Saws

Always run the saw at proper speed, too high or too low is equally bad.

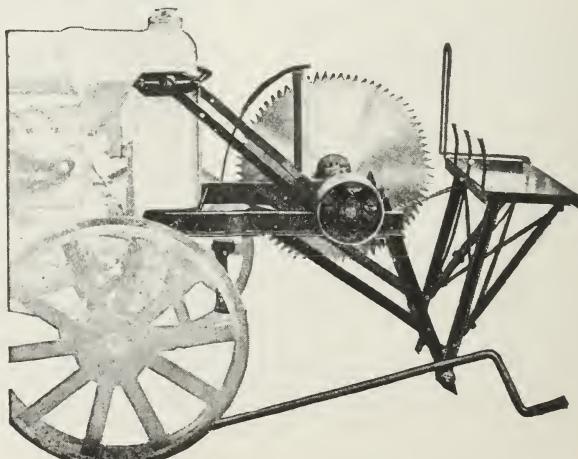


Dia.	No. Teeth	Speed	Net Price
20"	52	1800	\$3.50
22"	56	1636	4.00
24"	60	1500	4.50
26"	64	1384	5.00
28"	70	1285	6.00
30"	76	1200	7.00

Stover Saw Frame

Take the saw to the wood not the wood to the saw. With the Stover Rig attached to your Fordson, you can take your outfit wherever poles, etc., happen to be, saw them up, and go on. Complete with 30" saw and 5" rubber belt.

Price \$50.00.
Net Cash Price \$47.50.

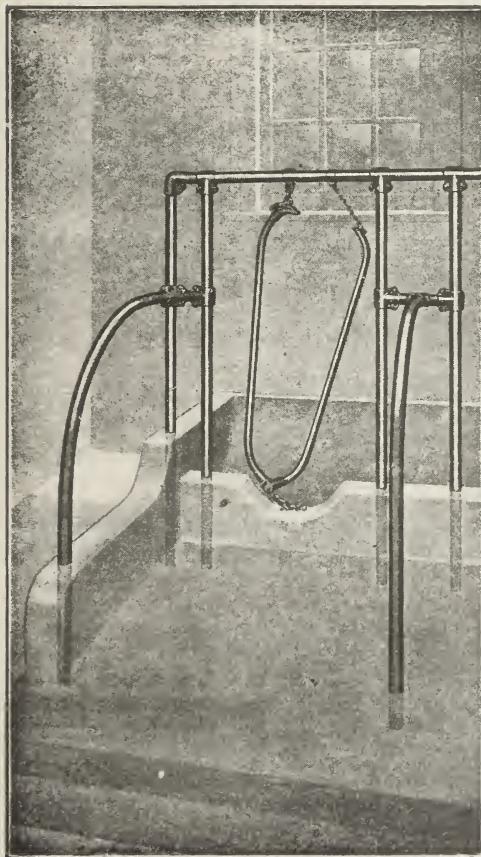


LOUDEN LITTER CARRIER

We believe this to be by far the greatest litter carrier ever built. Made to handle heavy loads of wet manure easily, safely and for many years.

Tub is water tight, full 12-bushel capacity. The worm gear hoist on this Louden Carrier is built on the same principle as the highest grade industrial hoists. It is far superior to the dangerous, troublesome brake and ratchet type.

Load hangs squarely under the track with minimum wear on trolleys. Roller bearing wheels. Sturdy steel track, good for a lifetime. Tub trips from either end. In every respect a quality carrier. Close comparison with any other merely emphasizes its outstanding superiority. Prices and complete description gladly furnished. Ask for them.



Louden Steel Stalls and Stanchions

Famous the world over as the "Pasture Comfort" Stall. Built with single-chain-hung and anchored stanchion, which permits the cow to get up and lie down easily without lunging and struggling.

Made of the highest quality steel—extra strong and durable. Full 1 5/8-inch O.D. high carbon open-hearth steel tubing—not soft pipe. Set solidly in concrete for permanent satisfaction. Couplings, certified malleable iron with patented dust proof construction. The Louden is unquestionably the most sanitary stall on the market.

Furnished with tubular steel, wood lined or closed top stanchions, as selected by the customer.

Louden Stall No. 812

The highest quality Louden Stall—double posts give double strength. Cows easily turn and card their sides and rest at ease. Chain guide stanchion always hangs in proper position to receive cow's head. Stanchion latch cow proof, easily opened with one hand. If you want the best, this is it.



GRINDSTONES

SAMSON MOUNTED GRINDSTONES

This frame is made of seasoned hard wood. The legs are securely gained into side pieces and the ends are in one piece. Two bolts at each end pass through the entire frame from side to side. The ends of the side bars are neatly turned to serve as handles. No. 1 with large stone. **\$10.50** Net.

No. 2 with medium stone **\$10.00** Net.



NORKA BALL BEARING GRINDSTONE

A very strong and easy running grindstone, practically indestructible. The frame is constructed of heavy tubular steel, thoroughly braced. The shaft is of cold rolled steel and turns in a splendid ball bearing device. The Pitman connection is also ball bearing.

Price **\$10.00** Net.

ALOXITE — A GREAT SCYTHE STONE



Made in four sizes.

No. 188 — 10" long	Price \$0.30
No. 190 — 10" long	" .30
No. 191 — 12" long	" .35
No. 192 — 10" long (heavy)	.35

CARBORUNDUM NO. 57 FILE

Here is one of the most useful tools that you can own. Will sharpen about every farm or garden tool. Price **\$1.00**.

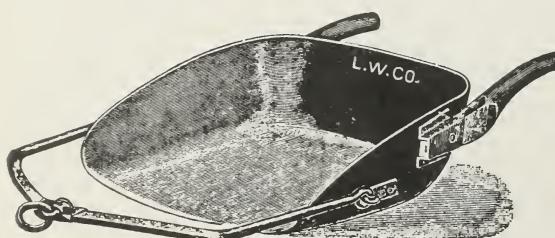


Fig. 603.

STEEL DRAG SCRAPERS

No. 3 — 3 cubic ft. **\$8.50** Net.

No. 2 — 5 cubic ft. **9.00** Net.

No. 1 — 7 cubic ft. **9.50** Net.

All-Wood Frame Steel Tray General Purpose BARROW



For the contractor, farm, garden and home use, cheapness and lightness have not been gained by sacrificed strength, rigidity or finish. And it has not been made by simply building it "child size". It is a real man's barrow and is made for real work.

Price \$5.00 Net.

GARDEN BARROWS

These barrows are nicely painted and striped, either red or green and built to last a lifetime.



	Number	With Wood or Steel Wheels	Inside Measurement of Box, Length, Inches	Width at Wheel End, Inches	Width at Handle End, Inches	Depth, Inches	Diameter of Wheel, Inches	Tread of Wheel, Inches	Weight Each, Pounds	Net Price.
Eastern Garden	3	Medium	24	16	20	10½	18	1½	40	\$7.00
Eastern Garden	4	Large	26½	18½	23	12	20	1¾	45	7.50
Buch's	2	Large	27	20	24	12	20	1¾	50	8.25
Buch's	3	Medium	26	19	22	12	20	1¾	50	7.75
John Deere		Medium	27	19	22	13	20	1¾	50	8.00
John Deere		Large	29	20	23	16	20	1¾	55	8.50

MORTAR BARROWS



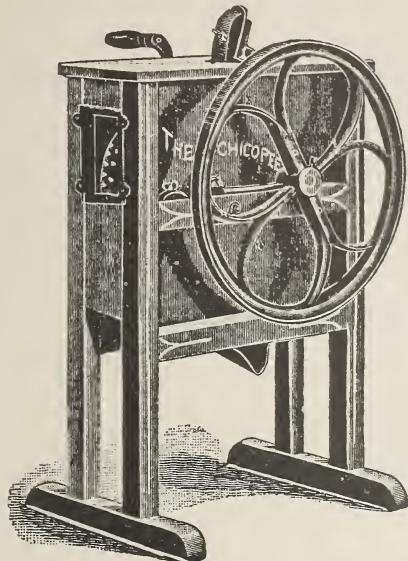
Lansing	No. F2	(as shown)	\$7.50
"	" F24	(deeper tray)	8.00
John Deere	" C3½	(oval front)	8.00



20 acres Broadleaf grown on O. & W. Blue Label Tobacco Fertilizer
by W. H. Healy, Mgr. for Drs. Starr & Lambson, South Windsor, Conn.



Broadleaf grown on O. & W. Fertilizer by Jacob Limberg,
Naubuc Avenue, East Hartford, Conn.



Corn Shellers

Frame—Of hard wood, well mortised together, and neatly painted.

Large Hopper—Adjustable to shell all sizes of ears, and large Dent corn as well.

Heavy Fly-Wheel—With shaft of cold rolled steel gives not only strength of construction, but smooth running with little power.

Separator—On the front of the machine, which separates the ears from the shelled corn.

Chaff Sieve—Assists in screening the corn which passes out through the small spout at the bottom. Weight 125 lbs.

Chicopee—One hole hand. (as shown)
Price \$12.50. Net Cash Price \$11.88.

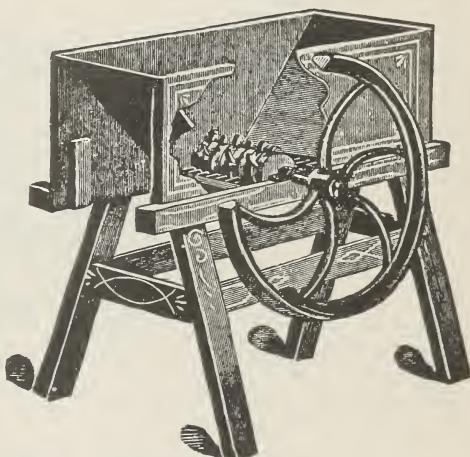
Chicopee—Two hole power.
Price \$30.00. Net Cash Price \$28.50.

Lion—One hole hand.
Price \$13.50. Net Cash Price \$12.83.

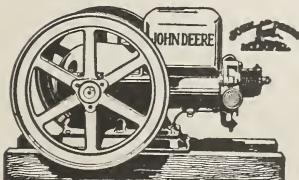
Champion Vegetable Cutter

This is one of the best machines in the market for cutting all kinds of vegetables. It is made with a wrought shaft with sections of knives fastened to it, and arranged so that a rotation of knives is continually passing a bed knife with cross knives passing between the section of knives; cutting always near the center shaft, making it cut easy and fine enough for cattle or sheep; also making a very regular cut.

This machine will cut sixty bushels an hour
Price \$12.00.
Net Cash Price \$11.40.



John Deere Type E Farm Engines



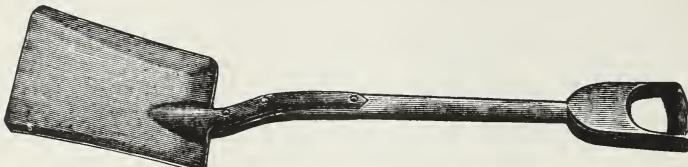
Contain the greatest improvements in engine building made in years. All important working parts fully enclosed in dust-proof case are oiled automatically. Magneto equipped.

Horsepower Engine

	Price
1 1/2	\$70.00
3	105.00
6	175.00

	Net Cash Price
1 1/2	\$66.50
3	99.75
6	166.25

**SQUARE AND ROUND POINT WOOD D. OR LONG
HANDLED PLAIN BACK FULL
POLISHED SHOVELS**



No. 2 and No. 3, Grade A, \$1.50 ea.



**WOOD D. OR LONG HANDLED PLAIN BACK
FULL POLISHED No. 2 SPADES**

\$1.50 ea.

COAL SCOOPS

No. 3 Riveted back	\$1.75
No. 4 " "	1.85
No. 5 " "	1.95

HOUSEHOLD FURNACE SCOOPS

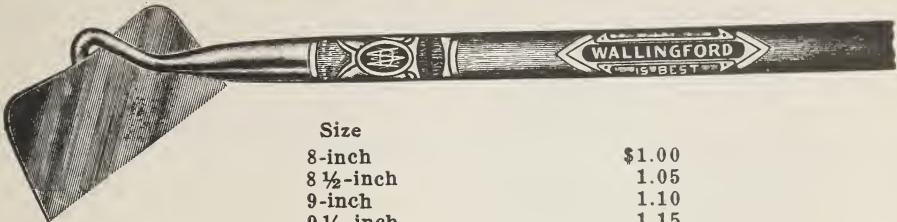
Long Handle	1.00
Mal. D. Handle	1.00
Oliver Ames	2.00

SNOW SHOVELS

No. 25 Trojan spring steel (black) . . . . .	.95
No. 29 Eclipse (Galv.)	1.10
Wirts Snow Pushers	1.75
No. 81 Snow Scoop 30 in.	8.00
Sidewalk Cleaners, socket pattern . . . . .	.85

TOBACCO HOES

These Hoes are specially adapted to Connecticut Valley Trade.



Size

8-inch	\$1.00
8 1/2-inch	1.05
9-inch	1.10
9 1/2-inch	1.15
10-inch	1.20
11-inch	1.25

Less 10% discount in lots of 1 dozen or more.

GARDEN OR FIELD HOES

7-inch	\$0.90
8-inch	.95

STEEL GARDEN RAKES

12 Teeth, 5 1/2 ft. Handle	\$0.90
14 " " "	.95
16 " " "	1.00
18 " " "	1.15

WIRE LAWN RAKES

24 Teeth—Bolted Pattern	\$0.90
Brume	.75

SPADING FORKS

4 Tine, Long	Handle, Strap Ferrule	.	\$1.50
4 " Mal. D	" " "	.	1.50
5 " Long	" " "	.	2.00
5 " Mal. D	" " "	.	2.00

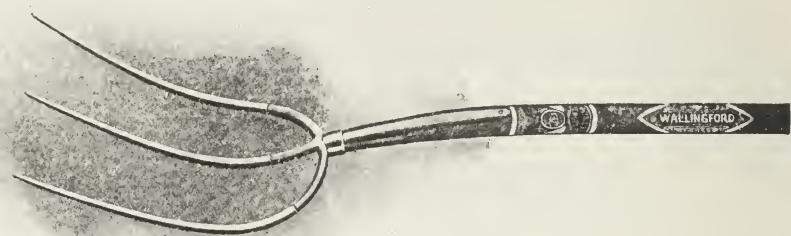
GARDEN CULTIVATORS

3 Tooth Short Handle (8 in.)	.	.	.	\$0.50
3 " Long " (4 ft.)	.	.	.	.85
5 " " (4 1/2 ft.)	.	.	.	1.25

TURF EDGERS

Long Handle, Shank Pattern	\$1.00
Iron D " " "	1.00

Oval Three-Tine Ferrule Hay Forks



4 ft. Bent handle, 13 in. Tine, plain ferrule	.	.	.	.	\$1.00
4½ ft. " " 13 " " "	.	.	.	.	1.10
5 ft. " " 14 " " "	.	.	.	.	1.25
5½ ft. " " 14 " " "	.	.	.	.	1.35
6 ft. " " 14 " " strap ferrule	.	.	.	.	1.60

Manure Forks



	Price	Price	Price
	4 Tine	5 Tine	6 Tine
Long Handle Common Ferrule	\$1.35	\$1.50	\$1.75
Long " Strap " "	1.45	1.65	1.85
Mal. D " Common " "	1.35	1.50	1.75
Mal. D " Strap " "	1.45	1.65	1.85
Wood D " Common " "	1.70	1.90	2.10
Wood D " Strap " "	1.80	2.00	2.20
Large 4 Tine Fork for handling light manure. Wood D	\$2.75.	Mal. D \$2.50	

Steel Manure Hooks

4 Tine Bent Head 5 ft. Handle	.	\$1.15	6-ft. handle \$1.30
5 " " " 5 ft. "	.	1.25	6-ft. handle 1.40

Steel Potato Hooks

4 Tine Bent Head 4½ ft. Handle	.	.	.	.	\$0.90
5 " " " " "	.	.	.	.	1.10
6 " " " " "	.	.	.	.	1.20

Myers Hay Unloader



Illustrating how track, rope stop and pulley should be placed in barn.

Place pulley to draw the carrier back into the mow directly under and in line with track, as shown in cut. Do not allow steel track hanging hooks to project below casting under track through which they are screwed, as they will interfere with the carrier.

Illustration above shows how steel track should be put up and how rope is tied from one rafter to the other close under the track to make stop for carrier at end of barn. Also shows how rafter brackets are placed.

DIRECTIONS FOR ERECTING MYERS PATENT STEEL TRACK.—

Scaffold by placing rope from rafter to rafter, say 6 feet from ridge pole or peak and about 10 feet apart. Then place extension ladder across the ropes with board to stand on. Now nail one rafter bracket at each end of barn and draw a line from one end to the other and stretch tight. Then nail all rafter brackets even with this line. You are now ready to put up the track, which can be done in sections. Hoist near to rafter brackets by ropes. Then place hanging hook over rafter bracket and finish by putting in bolt.

Material Required for a Steel Track Outfit for Different Length Barns.

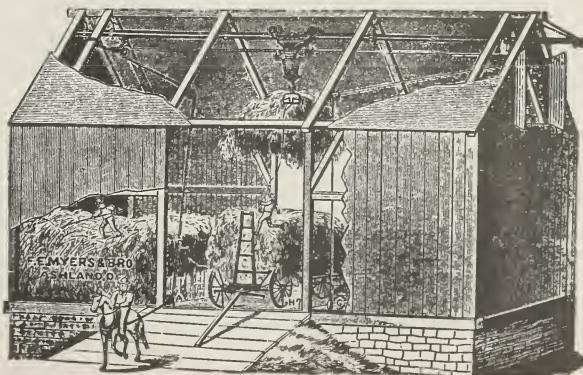
FOR A 40 FOOT BARN.—One Hay Unloader. 36 feet Steel Track. 19 Hanging Hooks. 19 Rafter Brackets. 5 Knot Passing Pulleys. 1 Fork or 3 Slings. 6 Floor Hooks. 110 feet $\frac{3}{4}$ inch Manila Rope. 50 feet $\frac{3}{8}$ inch Check Rope. 40 feet $\frac{3}{8}$ inch Reverse Rope.

FOR A 50 FOOT BARN.—One Hay Unloader. 48 feet Steel Track. 25 Hanging Hooks. 25 Rafter Brackets. 5 Knot Passing Pulleys. 1 Fork or 3 Slings. 6 Floor Hooks. 130 feet $\frac{3}{4}$ inch Manila Rope. 55 feet $\frac{3}{8}$ inch Check Rope. 50 feet $\frac{3}{8}$ inch Reverse Rope.

Different lengths of barns will use track, hanging hooks and rope in same ratio as above.

If required to take hay in at end of barn and have rope pass down at far end to horse, same amount of draft rope. If draft rope be returned to same end of barn and then down, this requires about one fourth more draft rope.

Prices on application.



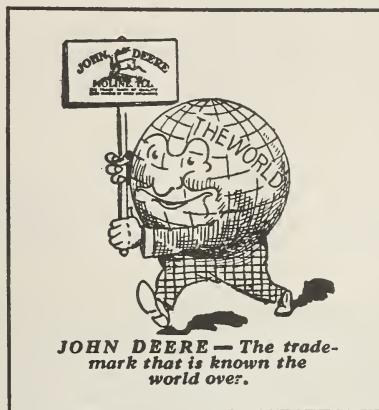


Broadleaf Tobacco grown on O. & W. Fertilizer
by Roger Howard, East Hartford, Conn.



Broadleaf Tobacco grown on O. & W. Fertilizer by Frank Dowd,
Ellington, Conn.

What Our Farm Implement Service Means to You



- 1.** We sell implements that are especially adapted to this section, made by John Deere—a firm that has almost a hundred years' reputation for making only high quality goods and for standing back of its goods.
- 2.** We show you the goods before you buy.
- 3.** We set the implements up exactly right before we turn them over to you.
- 4.** We are always ready to help you understand thoroughly the operation of the equipment we sell.
- 5.** We maintain prompt repair service, so that when parts become worn, you can renew them without loss of time.

Be Sure to Consider These Features When You Get Ready to Buy.



Why O-Molene Is Best

Thousands of horses lose their working ability and pep after 7 or 8 years of service. While others do hard work for 15 or 20 years. It's not because some have not been fed plenty of feed. A monotonous diet of corn, oats and hay doesn't give them a healthful variety.

What Goes Into O-Molene

To make O-Molene the perfectly balanced feed for horses and mules it goes thru a special process of manufacture. The grains are crushed and made more appetizing to the animal as well as more easily digested.

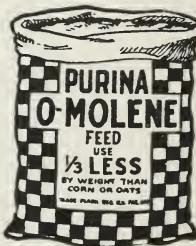
Only choice ingredients are used. Horses must have a feed that contains variety. O-Molene supplies a perfectly balanced ration.

What Is Taken Out

First only the highest grade grains are used. These are dusted and thoroughly cleaned, taking out all the chaff, dust, clipped ends and other undesirable parts. Then the grain is dried in a large kiln so that much of the moisture you pay for in ordinary grain is removed.

The result is, it takes much less O-Molene than ordinary feeds to keep a horse in perfect condition, and make him live and work longer.

Try a few bags and you'll agree that O-Molene costs less in the long run.



Feed Purina Cow Chow

and your cows will get all the Protein and Calcium needed to balance your Carbohydrate roughness.

All we ask is that you give Purina Cow Chow a trial and let your milk scales show you why you should keep on feeding it.



Papc Cutters Pay Their Own Way



*Less Handling Cost
More Feeding Profit*

*A Better Way
To Put Up Hay*

The UNADILLA SILO

is built for
a Lifetime

It requires fewer repairs and less attention than any other building on your farm.

Its strong, smooth staves fit closely to form an airtight, frost-resisting and storm-defying structure. Steel cables hold the Unadilla erect, steady and secure on its foundation.

The big hoops are tightened in front. The corner fasteners form a safe, easy and always ready ladder.

Discount for cash and early orders. Ask for our catalog and literature on tubs, tanks and vats.



Papc Hay Chopper building stack of finely cut hay. The man at the machine is sharpening one set of knives while other set is in use. The swivel elbow at the top of the pipe allows the chopped hay to be delivered in any direction.



These Farmers find that their Unadillas
keep Silage prime.
Talcott Bros., Talcottville, Ct.



Price List of Papc Ensilage Cutters, Hay Choppers and Accessories. Effective Nov. 1st, 1931
F. O. B. Factory. Terms, Etc. as per Contract. Prices Subject to Change Without Notice.

Machine Style	Bentwood With	Capacity Tons per Hour	H. P. Tractor or Engine	Length of Cut in Inches	Rev. per Minute	ON LEGS Price	I-WHEEL MOUNT Price	Pulleys	Shipping Weight On Legs Mounted
Cutters									
No. R	2 knives	2 to 8	8 to 8	1, 2, 3, 4, 5, 6, 7, 8	700	\$160.00	Reach	325	1115
No. 21	2 knives	6 to 10	6 to 10	1, 2, 3, 4, 5, 6, 7, 8	700	216.00	Nurse	1213	1494
No. 81	3 knives	8 to 12	10 to 14	1, 2, 3, 4, 5, 6, 7, 8	650	225.00	Nozzle	1240	1510
No. 127	3 knives	12 to 20	14 to 20	1, 2, 3, 4, 5, 6, 7, 8	600	.....	Nutmeg	300.00	1998
No. 127	6 knives	12 to 20	14 to 20	1, 2, 3, 4, 5, 6, 7, 8	600	.....	Lath	340.00	2073
No. 158	3 knives	20 to 30	20 to 30	1, 2, 3, 4, 5, 6, 7, 8	500	.....	Knight	396.00	2670
No. 158	6 knives	20 to 30	20 to 30	1, 2, 3, 4, 5, 6, 7, 8	500	.....	King	445.00	2755
Chop'ers									
N*	3 knives	1 to 3	10 to 14	1, 6, 1, 8	650	Equipment 1 finger feed roll	\$316.00	Nido	.....
L	3 knives	2 to 4	14 to 20	1, 2, 3, 4, 5, 6, 7, 8	600	1 finger feed roll	365.00	Lido	1620
L	6 knives	2 to 4	14 to 20	1, 2, 3, 4, 5, 6, 7, 8	600	1 finger feed roll	400.00	Lido	2035
K	3 knives	4 to 5	20 to 30	1, 2, 3, 4, 5, 6, 7, 8	550	1 finger feed roll	400.00	King	2110
K	6 knives	3 to 5	20 to 30	1, 2, 3, 4, 5, 6, 7, 8	550	1 finger feed roll	470.00	Kido	2725
K	3 knives	4 to 7	20 to 30	1, 2, 3, 4, 5, 6, 7, 8	550	3 finger feed roll	520.00	Kidoro	2810
K	6 knives	4 to 7	20 to 30	1, 2, 3, 4, 5, 6, 7, 8	550	3 finger feed roll	650.00	Kimbo	3396
					550	3 finger feed roll	700.00	Kimly	3481

NOTE—Ensilage Cutter prices include traveing-feed table, 30 feet of pipe, elbow for top of pipe, tilting joint and extra set of cutting knives. Only 50% credit allowed on parts not wanted. Above are combination prices for complete units. When any regular parts are not wanted with machines, credit or deduct at one-half price, NOT full price.

NOTE—Hay Chopper prices include traveling feed table, 18 feet elevating pipe, swivel elbow, 2 lengths curved pipe, extra set cutting knives and tilting joint.

* Not furnished with six knives.

12 ft. Corn Grown by
Anthony Krawski, Wapping,
Conn.

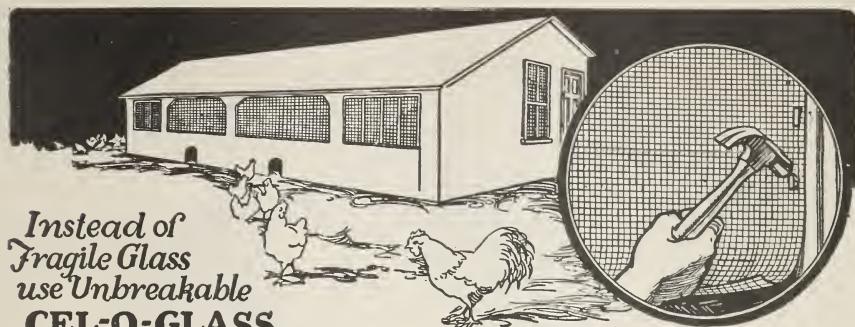
PURINA

Life Growth Eggs



Feed a Balanced Ration for Year Round Profits
buy **PURINA POULTRY CHOWS**
 at the Store with the Checkerboard Sign

PURINA



*Instead of
Fragile Glass
use Unbreakable
CEL-O-GLASS*

Cel-O-Glass is an unbreakable highly translucent material made by coating tough wire mesh with a transparent substance that lets through practically as much light as clear glass. Is very light in weight, absolutely weatherproof and extremely easy and economical to use. It is flexible, comes in rolls 3 ft. wide and can be used almost any place where fragile glass is required.

Prices on application.



B - K

B-K is especially adapted for the prevention and treatment of poultry diseases such as Roupe, Canker, Cholera, Bacillary and White Diarrhea. B-K is also a Powerful Disinfectant.

Prices 4 oz. 30c, 10 oz. 50c, Qt. 90c, Gal. \$2.00, 5 Gal. \$8.50

O. K. POULTRY LITTER

(Imported peat moss)

Per Bale \$3.25 Delivered.
5 Bale lots \$3.00 each Delivered.
25¢ per bale less at our warehouse.



CARBOLA

Carbola — The modern disinfecting whitewash can be used as a paint or powder spray it, brush it or dust it.

Prices 5 lb. 75¢, 10 lb. \$1.25, 25 lb. \$2.75, 50 lb. \$5.00.



**MAKOMB GIANT COAL
BROODERS**

For 1931, the following worthwhile improvements have been incorporated in the MaKomb Giant:

Square base and ashpit of greater capacity.

New type coal door hinge, eliminating binding or poor fit.

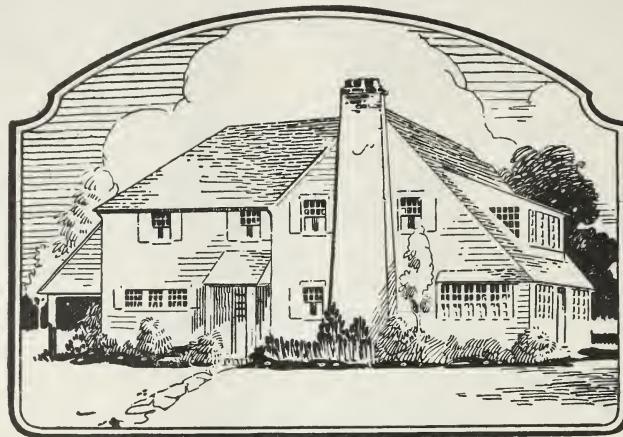
New Regulator Screw for easier adjustment.

Larger shaker handle, offset for convenience.

Hexagonal Canopy, handsomely; rigidly embossed.

Giant Specifications

	Chick Capacity	Coal Capacity	Shipping Weight	Price Each	Net Cash Price
47 in. Giant	350	35 lbs.	102 lbs.	\$15.75	\$14.97
56 in. Giant	600	52 lbs.	130 lbs.	22.00	20.90
65 in. Giant	800	73 lbs.	158 lbs.	26.00	24.70



Now is the Time

IF YOUR HOUSE OR BUILDINGS need painting, it is economy to paint at once. Delay is costly, because lumber warps and decays unless it is protected from the elements, and the longer you wait, the more paint will be required.

In selecting your paint, it will pay you to investigate B. P. S., because in addition to telling you it is the Best Paint Sold, we wish to show you that our claims are justified. B. P. S. Paint comes in slip-top cans, all sizes, so it can be examined and tested without trouble or waste. *Let us show you how fine it is ground—how easily it works—how well it covers—smell it—note the pure linseed oil odor.*

Before selecting your house colors call at our store and let us show you the B. P. S. Chart and House Combination Book. This book shows the various shades in body, trim and roof combinations. It will help you to select pleasing shades.

Safe-coat Your Roof with

Safekote more than waterproof

Roofing Products

It is part of our job — when you have a roofing problem to solve — to advise you how to solve it most economically and with the greatest amount of satisfaction.

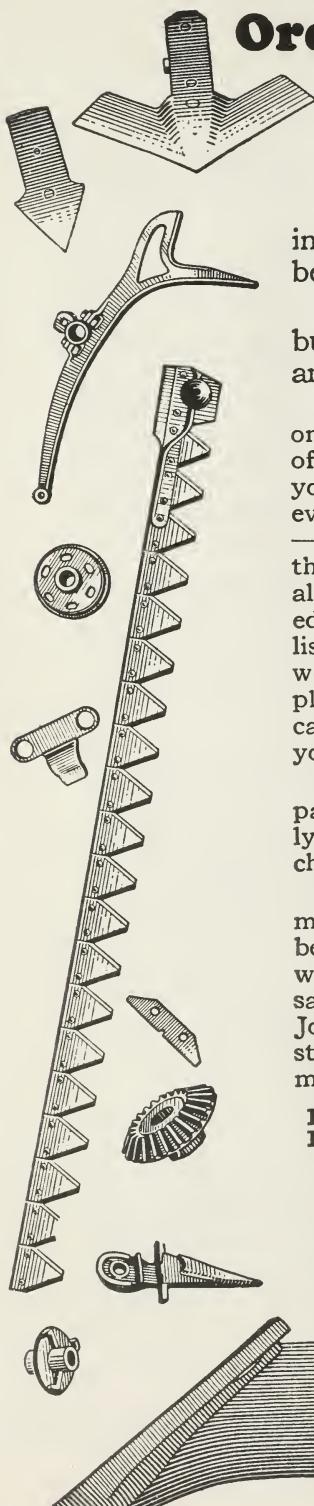
We heartily recommend Safekote roofings, whatever the problem; Slate surfaced shingles, strip or individual for your home, — barn or garage and Safekote roll roofings for other buildings.

We will also be glad to refer you to a reliable local roofing contractor or builder whom we know will lay the roof properly. He will guarantee his workmanship — Safe-pack Mills guarantees their products and we stand back of both with our assurance of satisfaction.

This is a sweeping assurance of roofing insurance for you — but it's sincere.

That's why we sell Safekote Roofing — also why we sell so much of it.

If you contemplate building a home or re-roofing the old one — telephone, write or call on us, so that we may prove to you how economically — how beautifully — how permanently — Safekote roofings will meet your requirements.



Order Your Repairs Before the Rush Comes

Don't get caught this spring with implements that cannot be operated because of a few needed repairs.

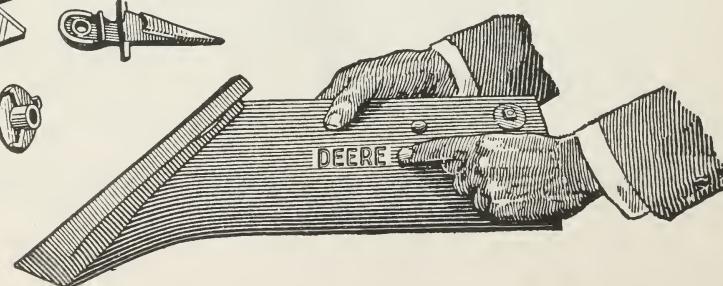
A delay of a day or two in your busy season may result in big dollars-and-cents loss.

Here's a way to prevent delays later on. Right now, when you have plenty of time, take a complete inventory of your implement equipment. Go over every machine you plan to use this year—see if new boxes are not needed—if the plow shares are in usable shape—if all parts are whole. Jot down the needed parts on each machine, give us the list so that we can order such parts that we may not have in stock. We will supply the new parts to you quickly, so you can get your machines in ship-shape for your field work.

Don't forget, too, that genuine repair parts last longer, fit better and materially prolong the usefulness of your machinery.

While you are going over your equipment, you may find machinery that is beyond profitable repair. Remember, we have a full line of John Deere labor-saving, crop-producing implements. John Deere machinery, built to a high standard of quality, is the most economical in the long run.

Don't forget to order your repairs early. Last-minute ordering is usually costly.



SEED AND PLANT TABLES.

		Quantity Per Acre	Weight Per Bu.
Barley .	.	95 to 120 lbs.	48 lbs.
Blue Grass (Canada) .	.	25 to 40 lbs.	14 lbs.
" (Kentucky) .	.	25 to 40 lbs.	14 lbs.
Buckwheat .	.	50 to 60 lbs.	48 lbs.
Clover-Alfalfa (Broadcast) .	.	20 to 30 lbs.	60 lbs.
" (Drills) .	.	15 to 20 lbs.	60 lbs.
" Crimson .	.	10 to 20 lbs.	60 lbs.
" Red .	.	10 to 15 lbs.	60 lbs.
" White .	.	5 to 10 lbs.	60 lbs.
Corn (Hills) .	.	15 to 20 lbs.	56 lbs.
" (drills for fodder) .	.	60 to 75 lbs.	56 lbs.
" (broadcast) .	.	120 to 150 lbs.	56 lbs.
Cow Peas in Drills.	.	60 to 90 lbs.	60 lbs.
Millet (Common) .	.	25 to 40 lbs.	48 lbs.
" (Hungarian) .	.	25 to 40 lbs.	48 lbs.
" (Japanese) .	.	12 to 20 lbs.	32 lbs.
Oats .	.	60 to 90 lbs.	32 lbs.
Orchard Grass .	.	25 to 40 lbs.	14 lbs.
Rape (broadcast) .	.	5 to 6 lbs.	60 lbs.
" (drills) .	.	3 to 4 lbs.	60 lbs.
Red Top (unhulled) .	.	25 to 40 lbs.	14 lbs.
" (re-cleaned) .	.	10 to 15 lbs.	35 lbs.
Rhode Island Bent Grass .	.	25 to 40 lbs.	14 lbs.
Rye Grass (Italian) .	.	40 to 50 lbs.	18 lbs.
Soja Beans (broadcast) .	.	50 to 75 lbs.	60 lbs.
" " (in rows) .	.	20 to 30 lbs.	60 lbs.
Sudan Grass .	.	15 to 20 lbs.	.
Timothy .	.	15 to 30 lbs.	45 lbs.
Vetch (Spring) .	.	50 to 70 lbs.	60 lbs.
Vetch (Winter) .	.	30 to 60 lbs.	60 lbs.
Wheat .	.	90 to 120 lbs.	60 lbs.
Potatoes .	.	12 Bu.	60 lbs.
Clover, } together, for one acre,.	.		{ 8 pounds
Timothy, }	.		1/4 bushel
Red Top, }	.		3 pounds
Peas in drills are sown 1 1/2 to 1 1/2 bushels to the acre.	.	usually sown to the acre, 2 1/2 to 3 lbs.	.
Carrots, .	.	" " " " " " 4 to 6 lbs.	.
Beets, .	.	" " " " " " 3 to 6 lbs.	.
Parsnips, .	.	" " " " " " 4 to 6 lbs.	.
Onions, .	.	" " " " " " 1 lb.	.
Ruta Bagas, .	.	" " " " " " 1 to 1 1/2 lbs.	.
Turnips, .	.	" " " " " " 1 1/2 to 2 bu.	.
Beans, .	.		.

Quantity of Corn Required to Plant an Acre, Five Grains in a Hill.

3 ft. x 2	.	18 qts.	3 ft. x 3	.	.	.	14 qts.
3 1/2 ft. x 3	.	10 qts.	3 3/4 ft. x 3	.	.	.	8 qts.
3 ft. x 4	.	7 qts.	4 ft. x 4	.	.	.	6 qts.

Number of Plants per Acre at Given Distances.

1 ft. x 1 ft.	.	43,560	9 ft. x 9 ft.	.	.	.	537
1 1/2 ft. x 1 1/2 ft.	.	19,360	12 ft. x 12 ft.	.	.	.	362
2 ft. x 2 ft.	.	10,890	15 ft. x 15 ft.	.	.	.	163
2 1/2 ft. x 2 1/2 ft.	.	6,969	18 ft. x 18 ft.	.	.	.	134
3 ft. x 3 ft.	.	4,840	20 ft. x 20 ft.	.	.	.	100
4 ft. x 4 ft.	.	2,722	25 ft. x 25 ft.	.	.	.	73
5 ft. x 5 ft.	.	1,742	30 ft. x 30 ft.	.	.	.	47
6 ft. x 6 ft.	.	1,210	40 ft. x 40 ft.	.	.	.	20

Quantity of Seed Required for a Given Number of Plants, or Number of Hills, or Length of Drill.

Asparagus, .	.	1 oz. to 65 ft. of drill	Musk Melon, .	.	.	1 oz. to 60 hills
Beets, .	.	1 oz. to 50 ft. of drill	Okra, .	.	.	1 oz. to 40 ft. of drill
Beans, Dwarf, .	.	1 qt. to 10 ft. of drill	Onion, .	.	.	1 oz. to 100 ft. of drill
Beans, Pole, .	.	1 pt. to 150 hills	Onion Sets, small, .	.	.	1 qt. to 4 ft. of drill
Carrot, .	.	1 oz. to 150 ft. of drill	Parsley, .	.	.	1 oz. to 150 ft. of drill
Cabbage, .	.	1 oz. to 3,000 plants	Parsnip, .	.	.	1 oz. to 200 ft. of drill
Cauliflower, .	.	1 oz. to 3,000 plants	Peas, .	.	.	1 qt. to 200 ft. of drill
Celery, .	.	1 oz. to 4,000 plants	Pumpkin, .	.	.	1 oz. to 40 hills
Cucumbers, .	.	1 oz. to 50 hills	Pepper, .	.	.	1 oz. to 2,000 plants
Corn, .	.	1 qt. to 400 hills	Radish, .	.	.	1 oz. to 100 ft. of drill
Dandelion, .	.	1 oz. to 200 ft. of drill	Salsify, .	.	.	1 oz. to 70 ft. of drill
Endive, .	.	1 oz. to 150 ft. of drill	Spinach, .	.	.	1 oz. to 90 ft. of drill
Egg Plant, .	.	1 oz. to 2,000 plants	Squash, early, .	.	.	1 oz. to 50 hills
Lettuce, .	.	1 oz. to 4,000 plants	Squash, marrow, .	.	.	1 oz. to 16 hills
Leek, .	.	1 oz. to 100 ft. of drill	Tomato, .	.	.	1 oz. to 3,000 plants
Watermelon, .	.	1 oz. to 80 hills	Turnip, .	.	.	1 oz. to 150 ft. of drill

One Gallon, by the U. S. Standard Unit of Liquid Measure contains 231 cubic inches.

The U. S. Bushel contains 2,150.42 cubic inches.

An Acre contains 43,560 square feet.

USEFUL CHEMICAL MEMORANDA

(Partly from the first annual report of the Connecticut Agricultural Experiment Station, 1876.)

Animal and vegetable substances, such as flesh, bone, wood, grain, manure, and the like, contain three classes of materials: Water, Organic Matters and Mineral Matter or Ash. If we heat a piece of wood, a whisp of hay, a bone, or a portion of manure or soil, in an oven, the water will be dried out. If we put the dried material in the fire, the *Organic Matter*, which consists mostly of the chemical elements, carbon, oxygen, hydrogen, and nitrogen will be burned away, and there will remain the *Mineral Matter or Ash*. The ash of these different materials generally contains more or less potash, soda, lime, magnesia, iron, alumina, silica, phosphoric acid, sulphuric acid, chlorine, or other ingredients. The proportions of these vary widely in different substances, from the large quantities to the merest traces.

Moisture.—All fertilizers contain more or less water, which, of course has no commercial value, and serves to make them heavier and relatively poorer in valuable ingredients. In the analysis that which is removed by heating to 212° Fahrenheit (or in some cases to a somewhat higher temperature), is designated as moisture. By subjecting the dried material to a higher temperature, the organic and volatile matters are driven off, and the ash remains. By treating this ash with strong acids, all that is of any value is dissolved.

Sand and Insoluble Matters.—The residue, which resists the action of both fire and strong acids, consists of silica and other mineral matters. These possess no fertilizing value, and are classified as sand, etc.

Nitrogen, Ammonia.—In our ordinary fertilizers, much or all of the nitrogen exists in unavailable forms. By more or less rapid alterations, by decay or otherwise which take place in the soil, these are changed to other compounds, which the plant can readily use as food. Of these latter nitric acid, which contains nitrogen combined with oxygen, is one; ammonia which consists of nitrogen and hydrogen and is represented by the chemical formula $N. H.$ is another. 14 parts by weight of nitrogen unite with 3 parts of hydrogen to form 17 parts of ammonia. Accordingly 14 parts of nitrogen are said to be equivalent to 17 of ammonia, or what is the same thing 100 parts of nitrogen are reckoned as equivalent to 121 parts of ammonia. In pure sulphate of ammonia, all the nitrogen is in the form of ammonia. In Peruvian guano, some of the nitrogen exists as ammonia also. In our ordinary fertilizers there is little or no ammonia. The very common practice of reckoning nitrogen as ammonia in fertilizers which do not contain it in this form is incorrect, misleading and therefore wrong, and ought to be abolished. Ammonia combined with sulphuric acid, forms sulphate of ammonia; nitric acid combined with soda, forms nitrate of soda.

Phosphoric Acid: SOLUBLE, REVERTED AND INSOLUBLE.—By phosphoric acid is understood the compound of phosphorous and oxygen, which is represented by the chemical formula, P_2O_5 . This combined with lime, forms phosphate of lime. The phosphate of lime which occurs in bone, and in South Carolina and other fossil and mineral phosphates, contains three parts of lime to one of phosphoric acid. This is often called bone phosphate, and is insoluble in water. When the bone phosphate is treated with sulphuric acid, the latter takes part of the lime to itself, forming sulphate of lime, and leaves the phosphoric acid in the form of a *Superphosphate*. This last is soluble in water, and when used as a fertilizer can be taken up by the plant at once, while the bone phosphate is slowly available as plant food. Phosphoric acid which has been rendered soluble, often enters into other forms of combination with lime, alumina, etc., which, though insoluble in water, are soluble in citrate of ammonia. The terms, reverted, reduced and precipitated, are applied to it when in this form.

The reverted phosphoric acid ranks in solubility, and consequently in values between the soluble and insoluble. The soluble and reverted are sometime, classed together as *Available* phosphoric acid.

In some analyses the percentage of phosphoric acid is not stated separately, that of "bone phosphate of lime" being given in its stead. Sometimes the expression "soluble bone phosphate of lime" is met with, which is certainly a misnomer. 142 parts by weight of phosphoric acid P_2O_5 unite with about 168 parts of lime CaO to form 310 parts of bone phosphate $Ca_3(PO_4)_2$; 100 parts or pounds of phosphoric acid are said, therefore, to be equivalent to 218 parts of bone phosphate. Special stress is laid on this point, because those not familiar with chemistry are apt to be deceived in comparing analyses, in some of which the term phosphoric acid, and in others the term bone phosphate, is used. It would be more accurate and clear, and in every way better to discard the term bone phosphate of lime in analyses of fertilizers, and speak only of phosphoric acid.

Potash, or potassa, is the compound of the metal potassium with oxygen, which is represented by the chemical formula K_2O or KO . This combined with sulphuric acid forms sulphate of potash. Potassium and chlorine together form chloride of potassium, or "muriate of potash," as it is called by dealers.

100 pounds of pure sulphate of potash contains about 54 pounds of "actual potash." 100 pounds of sulphate of potash are therefore said to be equivalent to 54 pounds of actual potash, and vice versa, 54 pounds of potash, in the sulphates are reckoned as equivalent to 100 pounds of sulphate of potash. In the "muriates" 100 pounds of chloride of potassium are reckoned equivalent to about 63 pounds of potash, and vice versa.

Carbonate of Potash, K_2CO_3 .—This fertilizer chemical is the ingredient which gives to wood ashes and cotton hull ashes their value as tobacco fertilizers, and it is practically free from magnesia. It was formerly prepared by extraction from wood ashes, and formed the "pearl ash" of commerce. It has been used with good effect as a tobacco fertilizer in the Poquonock experiments.

The following figures will be found useful in calculations of the composition of fertilizers.

NITROGEN COMPOUNDS

14.	parts of Nitrogen	are contained in	17.	parts of Ammonia.
100.	"	"	121.43	"
82.35	"	"	100.	"
17.	"	Ammonia	66.	" Sulphate of Ammonia.
100.	"	"	388.2	"
25.8	"	"	100.	"
14.	"	Nitrogen	66.	"
100.	"	"	471.4	"
21.2	"	"	100.	"
14.	"	"	54.	" Nitric Acid.
100.	"	"	385.7	"
25.9	"	"	100.	"
14.	"	"	85.	" Nitrate Soda.
100.	"	"	607.1	"
16.47	"	"	100.	"
34.	"	Nitric Acid	85.	"
100.	"	"	157.4	"
63.5	"	"	100.	"
85.	"	Nitrate of Soda correspond to	17.	" Ammonia.
100.	"	"	20.	"
500.	"	"	100.	"

PHOSPHORIC ACID

100.	parts of Phosphoric Acid	correspond to	218.3	parts of Bone Phosphate.
45.8	"	"	100.	"

POTASH (Potassa)

100.	parts of Sulphate of Potash	contains	54.08	parts of Potassa.
82.49	"	"	100.	"
100.	"	Chloride of Potassium	correspond to	63.17 parts of Potassa.
58.3	"	"	"	100.

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